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THE TRAFFIC FIELD

ONE OF A SERIES OF TREATISES ON SCIENTIFIC TRAFFIC MANAGEMENT

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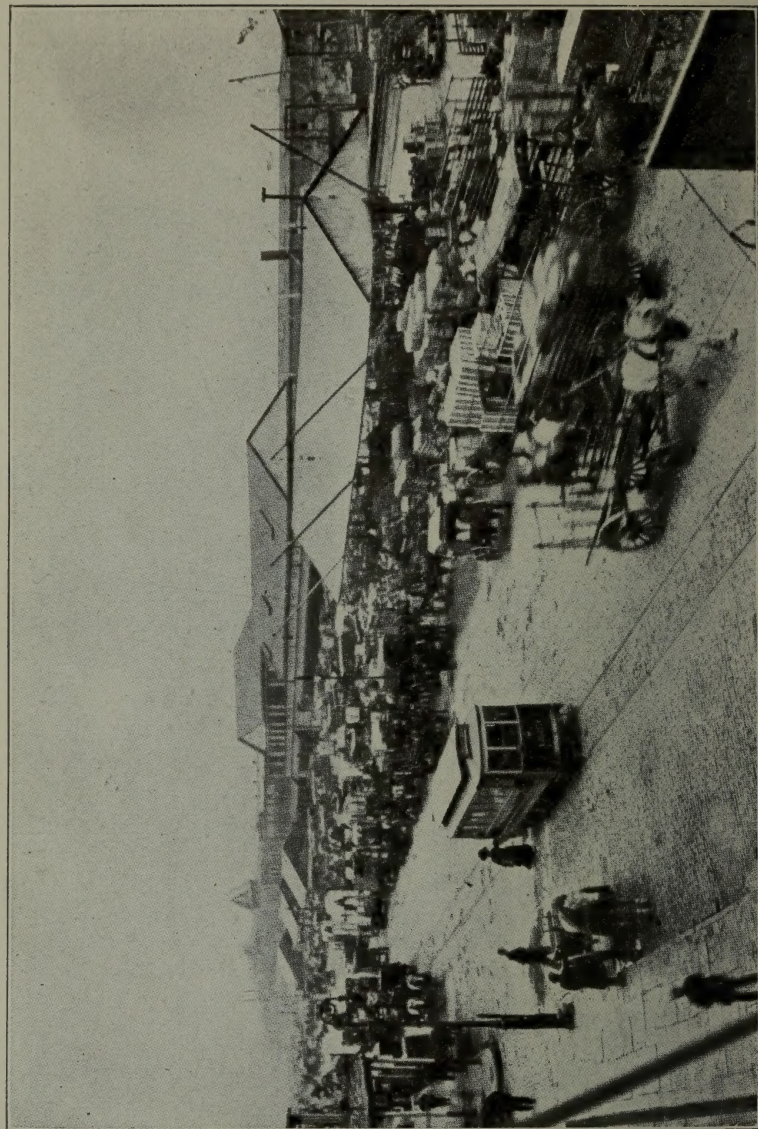
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Application of Agency Tariffs
The Law of Carriers of Goods
Practical Traffic Problems

LASALLE EXTENSION UNIVERSITY



A View of a Congested Terminal

THE TRAFFIC FIELD

Comprising

THE INDUSTRIAL TRAFFIC DEPARTMENT

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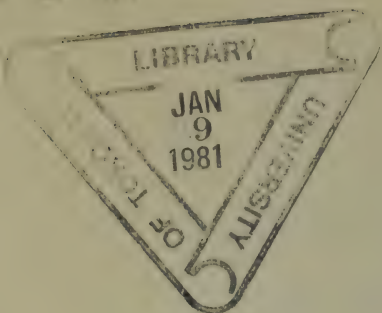
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PREFACE

The somewhat superficial conception of traffic management as a profession and its relationship to our national transportation problem has been the primary factor leading to assembling in book form various lines of endeavor most susceptible to its exercise. Too often, far too often, the incumbents acting as the traffic managers for relatively large industries operate on the theory that in the main their activities are concerned with the quoting of rates and the handling of loss, damage, or overcharge claims, little if any attention being paid to questions of service, the solution of intricate questions pertaining to supply and distribution, or the exercise of the old adage, "An ounce of prevention is worth a pound of cure."

Then again while several of our most progressive municipalities have recognized as matters of community interest the growing importance of adequate transportation facilities and just and reasonable charges and fares and, in consequence, have employed competent traffic commissioners, the great majority of our cities still regard the problem as an individual one or as a necessary evil, a policy which more often than otherwise is reflected in stagnation and the lack of enterprise so far as such centers are concerned.

With respect to regulation and control, so far the necessary safeguard has not been established that will always insure the selection for public utility commis-

sioners of men of the caliber and character necessary to administer the functions of their offices intelligently and honestly and to contribute their share to the solution of local, state-wide, or national transportation problems. The "friend of the party," "the Governor's nephew," or "Red Mike's nominee" qualifications must give way to the single standard—ability—if progress is to be made.

It is our thought that in giving as it were a bird's-eye view of the broad traffic field and some discussions of the problems of traffic management, a substantial contribution is made to the equipment of the many men acting in some capacity or other in this line of endeavor, which is as justly entitled to the appellation "profession" as that of the doctor, lawyer, or merchant.

The men who have contributed to this volume have earned their spurs in the particular provinces of which they write, and we deem ourselves most fortunate in securing their services in the preparation of this material and thru their aid to be able to offer the business world an authoritative, complete, and condensed manual treating the opportunities in the field and suggesting ways and means which have been tried and proved.

Acknowledgment is due to Mr. Ralph Edgar Riley, of the LaSalle Extension University, who assembled much of the material necessary in the production of the volume and to the painstaking efforts of Miss Carrie Brant, of the same institution, who in revising, arranging, and editing the manuscript has contributed to the general excellence of the volume in those respects.

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THE TRAFFIC FIELD

PART I

THE INDUSTRIAL TRAFFIC DEPARTMENT

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THE TRAFFIC FIELD

PART I

THE INDUSTRIAL TRAFFIC DEPARTMENT

CHAPTER I

INTRODUCTION

Traffic Management—Progressive and Nonprogressive Types—New School—Former Views—Practical Training—Magnitude of Plant—Area—Population—Post Offices—Railroad Stations—Transportation Instrumentalities—Division of Labor—Transportation Charges—Uniform Practice—Classification Inconsistencies—Necessity of Audit—Transportation as a Commodity—F. O. B. Sales versus Delivered Costs—Legal Obligations.

Practically everything to have value must be moved from places of abundance to places of shortage or demand. Traffic work or traffic management is concerned with this distribution, effecting it by the most expeditious means and at the least expense.

The increasing importance of adequate transportation facilities, the intelligent employment of those available for use, and common-sense railway regulation are issues vital to the hour.

The solution of these questions can be accomplished only by a recognition of the fact that the success of each of the several factions concerned, the railroad, the shipping public, and the government, is to a great degree contingent on the success of the others.

In the past the shipping public and those concerned with the operation of our railroads have resembled hostile camps, with a public utility commission acting as the vacillating ally first of one faction and then of another.

Fortunately, the "public-be-damned" type of railroad official, the "soak-the-railroad" type of shippers, and the narrow-minded, nonprogressive public utility commissioner are types that are rapidly disappearing. They are no longer welcome in the forum of modern business efficiency. Rapidly supplanting these types is the broad-minded and progressive technically trained man who rigorously demands his own rights and respects those of opposing interests.

The bigger men in the industrial traffic field do not look upon the transportation companies as private interests separate from their own, to be exploited at will. Instead, they now regard them as a plant auxiliary or affiliated industry, to be maintained and administered with an efficiency that will enable them to assemble and distribute the wares of industry with a minimum amount of inconvenience and expense.

This new attitude has resulted in creating a new profession, that of scientific traffic management. From the proficient graduates of this school must come the needed reforms in the greatest transportation machine that has ever been developed in the history of the world.

The title of "traffic manager" has been a much used, and at the same time a much abused, title. This abuse is not confined to the general public, but in many cases the traffic manager himself is ignorant of what his title implies.

In the minds of many, for example, the industrial

traffic manager must be an ex-railroad man of more or less thoro training, who has a somewhat superficial knowledge of freight rates, some familiarity with packing requirements and classification rules, and the ability to audit freight bills with more or less exactitude.

This view is entirely too superficial and even incorrect. Many of the foremost traffic men are those who have had no previous railroad connections. The value of practical training of this kind is not to be discounted, but the idea or suggestion that it is a controlling factor is to be combatted vigorously.

In an address before a chamber of commerce, a speaker made this very significant statement:

The business which rates its traffic manager as a statistical clerk or as a glorified truckman is hopelessly behind the times; and so long as the need of a traffic manager is based upon the idea that a rather limited knowledge of traffic is all that is essential, that the location of an occasional overcharge on a freight bill, or the collection of a few loss and damage claims is all that is required, the work and necessity of a traffic manager have not been recognized or appreciated.

Big problems require the efforts of big men. Let us consider the magnitude of the plant that confronts the traffic manager of to-day.

The population of the United States is estimated to be in excess of 100,000,000, distributed over a land area of approximately 3,000,000 square miles. To appreciate the vastness of this land area, comparisons are essential. Austria-Hungary does not cover the state of Texas. France is contained within the states of Arizona and Utah. Belgium accounts for a small corner of the state of California, while

Germany does not equal the area of the Central Freight Association and the Trunk Line Freight Association rate territories.

According to recent figures there are approximately 132,000 post offices in this country, which are classified according to population as follows:

	<i>Population</i>		<i>Offices</i>
Over	100,000	.....	60
Between	50,000	and 100,000	60
"	25,000	" 50,000	131
"	10,000	" 25,000	445
"	5,000	" 10,000	548
"	3,000	" 5,000	844
"	2,000	" 3,000	1,043
"	1,000	" 2,000	2,921
Under	1,000	.....	125,929
			<hr/>
Total			131,981

A great many of the points indicated as post offices are, from a transportation standpoint, designated as "inland stations" because they are not reached directly by a transportation line. It is roughly estimated that 90,000 places are served by railroad or other transportation companies.

The census shows 46.3 per cent of our population as urban residents, the remainder—53.7 per cent, as rural population. Urban centers are not self-sustaining; that is to say, they rely wholly or in part on the rural districts for the absolute necessities of life.

It has been stated that were New York, Chicago, Boston, or any other large city deprived of its means of communication with the interior, the pinch of hunger would be felt within seventy-two hours and that within a week famine would stalk rampant. The fuel shortages, heatless Mondays, recently experienced in this

country, followed not so much in consequence of a shortage in production, but in consequence of a breakdown of the transportation machines, the shortage of cars and motive power, and an unusually rigorous winter.

Binding together these rural and urban centers, the greatest transportation system ever known has come into existence. Giant cars of 40 to 100 tons capacity and monster locomotives transport incredible quantities of stuffs across the continent at a surprising speed, thus annihilating distance, and placing the extremes of the country in close communication with each other. This gigantic plant consists of 250,000 miles of steel rails, 67,000 locomotives, and over two million cars.

Connected with the actual operation of this plant, there is a vast army of workers. The figures of the Interstate Commerce Commission for the year ended June 30, 1916, show that the railroad companies paid a sum exceeding \$1,403,000,000 to more than 1,654,000 employees. Reckoning with these workers of allied industries such as railway supply manufacturers, car and locomotive builders, coal miners, lumber men and the like, it is stated that one person out of every fifteen of our adult population is directly or indirectly dependent upon the success of the transportation industry for his or her livelihood.

The labor cost of the transportation industry is gigantic. More than forty cents out of every dollar that the railroad companies receive for transportation is paid out by them in the form of wages to employees.

By means of collective bargaining, employees of the operating department, such as engineers, firemen,

and other trainmen, have succeeded in establishing wage scales which have made them "aristocrats" of labor.

Unfortunately the positions of agents at the smaller stations and of clerks in the larger stations have not paid sufficient remuneration to attract a competent class of employees or to retain those that were secured. The present improved financial condition of the railroads, due to increased efficiency, the elimination of waste, and the authorized increase in transportation charges, will no doubt result in the adequate compensation of this class of employees.

The greatest problem in the American transportation plant has always been the rate of charge. The owners thru the officers of the companies desire to protect the investment and to secure as large returns as possible for betterment and dividends. The shipping public naturally wishes to purchase transportation for as low a figure as possible. The government is mediator in this situation, preventing as far as possible, and adjusting when necessary, questions of discrimination.

During the early days of railway construction and operation, and for many years thereafter, each railway company was a law unto itself. Rules and regulations were established to govern the transportation of persons and property over such lines without regard to the practice on connecting lines, or lines in the same territory.

Later, these small lines were consolidated into larger lines or into thru routes which were operated under a common control, but the same policy was continued. Each line or route was a law unto itself. Still later, these competitive routes came to a realization of a

unity of interest and formed associations to promote the welfare of the member lines, and each one of these associations became a law unto itself, and to a very large degree this is the situation to-day.

Uniform practice in any work is desirable, perhaps more so in transportation than in many others. Taking first the most elementary item of freight transportation, that is, the classification of goods offered for transportation, a most unsatisfactory condition exists. It is a direct outgrowth of the desire of roads, routes, or associations, to be paramount in their particular province.

It is stated by an eminent authority that there were at one time 138 distinct classifications in Eastern Trunk Line Territory, and that up to a short time before the passage of the Act to Regulate Commerce (1887) there were 130. The grievance of the shipping public was the lack of unity in the classifications of merchandise. There were differences (1) in the articles actually described; (2) in the description of such articles as were described; (3) in packing requirements; (4) in carload minimum weights; (5) in ratings; and (6) in rules and regulations.

Under such conditions the shipper of dry goods, for example, could not understand why, in one case, his goods took a first-class rate, and in another, a second-class; why, if it was permissible to ship in bales in one case, he could not in all others; why, if a carload rate was applied to quantities of 10,000 pounds in one instance, 20,000 or 30,000 pounds should be demanded in others; why, if he should be given store-door delivery in Baltimore, he should be required to pay trucking costs in New York, Boston, or elsewhere; why, if a classification differentiated between

woolen goods and cotton goods, this difference should not appear in all classifications.

Shortly after the passage of the Act to Regulate Commerce, the carriers materially relieved the situation by consolidating many of these classifications into one. To-day there are but three interstate classifications, while ten of the forty-eight states have issues of this sort, the state issues applying to state or intrastate traffic, as it is called.

The reduction in the number of issues of this kind, satisfactory as it may seem, still leaves much to be desired. This lack of uniformity has been so interwoven into the fabric of transportation charges that the various rate adjustments are honeycombed with inconsistencies which, in many cases, assume the proportions of destructive discrimination, and which account for the loss of much business and necessitate the services of a competent traffic expert to bring order out of chaos.

There are over 1,600 individual transportation companies in this country. There are numerous rate-making agencies maintained by these carriers, and the carriers and their agents both issue schedules that have to do with the charges demanded of, and collected from, the shipping public.

In many cases the preparation of these schedules follows definite and systematic plans; formulas have been evolved after years of experiment and consideration. In other instances, charge may be made by the "rule of thumb," that is to say, whatever the traffic manager of the transportation company deems the traffic capable of paying.

It is surprising indeed to those intimately acquainted with the intricacies of this situation to observe the

seeming indifference of a great many prominent manufacturers and merchants as to what they pay for transportation. Hard-headed, shrewd business men may insist rigorously on the careful audit of material, operating and overhead expense as to quantity, quality, and disposition, and yet may approve the payment of bills for transportation with a disregard for their accuracy that borders on idiocy.

This may perhaps be due to the fact that transportation is not regarded by them as a staple article of barter and trade, as much so as an automobile, a consignment of pig iron, or a ball of string.

The successful manufacture of goods is contingent upon the proprietor's ability to draw crude or unfinished materials into a plant, convert them into a finished product, and distribute it at a profit over the widest possible area.

"The consumer pays the freight" is a common expression. Certainly it is reasonable to expect that the cost of labor, advertising, material, equipment, overhead and all other items of expense, perhaps also a jobber's or wholesaler's profit, be distributed over the product of an industry and thus passed on to the purchaser. However, the one great point frequently overlooked is that the ultimate consumer is not going to pay any more than he has to for articles or commodities of equal value to him.

The inability of a salesman to "open up" a territory or to dispose of his wares in certain localities is more often than otherwise due, not to his failure as a salesman, but to the existence of a more favorable rate adjustment applying on the output of a competitive house.

Illustrating this point, the following tabulation from

the *Weekly Farm to Table Bulletin* of the Wells Fargo & Company Express, tho elementary, is quite significant:

Article	Shipping Point	Country		Cost Delivered	
		Cost	Per Doz.	Per Case	
	Algoma, Wis.....	.38	.40 $\frac{1}{4}$	\$12.08	
	Anthony, Kan.....	.42 $\frac{1}{2}$	.47	14.10	
	Bolivar, Mo.....	.38	.41 $\frac{1}{2}$	12.45	
Fresh eggs	Douglas, Minn.....	.40	.43	12.90	
30 doz. lots	Ft. Wayne, Ind.....	.44	.45 $\frac{3}{4}$	13.72	
	Lohrville, Ia.....	.45	.48	14.40	
	Mineral Point, Wis....		.44	13.20	
	Tiffin, O.....	.45	.47	14.10	

This bulletin is distributed locally in Chicago and vicinity. It affords the rural population an opportunity to market in Chicago certain products directly to the consumer; it offers the consumer a better article without the middleman's profit. From the foregoing tabulation, it will be observed that the range between the highest and the lowest prices is 7 $\frac{3}{4}$ cents per dozen, or \$2.32 a case. Obviously, the consumer, unless he is given to throwing his money away, will buy where the article delivered will be the least expensive.

Too many rural residents believe that if eggs are selling for 50 cents in Chicago, the consumer there will gladly pay this plus any cost of transportation. This is also the attitude of many of our merchants and manufacturers toward their out-of-town patrons.

The price of eggs, coal, automobiles, or any other commodity is susceptible to several factors, among which the more important are (1) supply, (2) demand, (3) the competition of other articles, and (4) the consumer's ability to pay.

The supply is contingent upon the natural resources and the manufacturing capacity, or upon both. The

demand is influenced by the necessity for its use and the ability to pay the price demanded.

To illustrate, there is a certain number of dairy cattle in this country. These cattle produce a certain amount of butter-fat which is available for the manufacture of butter. A certain expense is incurred in the operation.

Butter is regarded by many as one of the necessities of life. Time was when butter could be purchased for 10 cents a pound. To-day in metropolitan centers, butter commands a price ranging from 40 to 60 cents a pound, or more.

Disregarding the ethics of this increase, its effect has been to curtail the sale of butter. The income of a considerable portion of our population will not permit the payment of such a price and as a result turn to substitutes, some of which are so satisfactory as to find immediate favor and to wean the purchaser forever from the idea of paying prohibitive prices for butter. As a consequence, a portion of the trade is lost.

A great many industries, commercial houses, and individual shippers may be likened to the egg merchants used in the illustration who fail to appreciate the force of transportation cost as applied to their offering.

Not long ago an automobile dealer was approached by a traffic expert who desired to interest him in establishing a traffic department.

"No, sir," the dealer said, "I do not need the services of a traffic man, since I buy and sell all my machines F.O.B. Chicago."

"Well, now," said the traffic man, "your remarks confirm my opinion that you do need a traffic man. As you deal in second-hand automobiles, I suppose you have numerous inquiries from out-of-town prospects."

"Yes."

"And like any other business you sell only a comparatively few of the prospects who inquire."

"Yes."

"Now, have you ever followed up these inquiries to ascertain why you did not make the sale?"

"Yes, and in those cases where the inquiry was from a bona fide prospect who ultimately purchased a car, we found that in the western territory he had bought in St. Louis, Indianapolis, Milwaukee, or in some other place nearer to his residence."

"Precisely so," said the traffic man. "If your price f.o.b. shipping point of a certain model or a given make of car is the same as that of a dealer in some other locality, the prospect is going to consider transportation costs in making his purchase. So you must be informed of the transportation costs and must shrink your selling price to offset the advantage of location and the contingent advantage in freight rates of your competitor. On a light car, for example, if the selling price in St. Louis and Chicago is the same, a customer in Kansas or Nebraska can purchase in St. Louis to advantage because his transportation charges will be from \$4 to \$20 per machine less than if he buys it in Chicago. The Chicago dealer is at a disadvantage and must shrink his selling price and his profits if he wishes to make the sale."

The purchase of automobiles, eggs, or any other commodity is governed by the same rule—the purchaser is going to buy in the market that will yield him the lowest aggregate cost. Only a competent traffic man will know how to meet such competition, how to prepare intelligent sales charts, and how to reduce trans-

portation bills by the proper shipping of goods. In this way, he will increase sales and contribute generally to the success of the concern.

Intelligent traffic work necessitates some knowledge of the transportation laws of this country. Shippers and carriers incur obligations that may not be disregarded under penalty of heavy fine. Ignorance of the law excuses no one, and not infrequently reputable concerns have found that they were guilty of fraud in obtaining transportation for less than the legally established charges. As a consequence, they suffered penalties which made a considerable inroad in their profits.

CHAPTER II

ORGANIZATION

Industrial Organization—Definition—Factors Determining Type—Organization Precedes Management—Efficiency Applied to Traffic Management—Principles of Efficiency—Ideals—Common Sense—Counsel—Discipline—The Fair Deal—Records, Dispatching, and Schedules—Standard-Practice Instructions—Efficiency Rewards—Types of Organization—Military—Functional—Line and Staff—Charts.

The traffic department must find a place in every efficiently administered industrial organization that has any amount of shipping, either inbound or outbound.

The term "industrial organization" as here used applies in a broad sense to all concerns engaged in barter and trade. The commission merchants handling shipments on consignment and disposing of them for the consignor's account on a commission basis would be so construed. Wholesalers or jobbers acting as an intermediary between the manufacturer and the retail dealer would come in the same category. It would include also those concerns whose industrial function is the conversion of raw or unfinished products into finished articles or commodities.

The question of organization logically precedes the question of management. The rookies, or raw recruits, must be mustered before they can be drilled and trained to be fighting men.

The character or type of the department that is best adapted to the individual requirements of a given

industry naturally rests to a large extent on the number of shipments, the volume of tonnage, and the character of goods.

A wholesale tailor, for instance, whose shipping for the most part consists of dry goods of light weight in and finished clothing of still lighter weight out has a somewhat elementary traffic problem. In an industry where the activities are many and varied and the items of transportation considerable, the problem is acute and requires the best efforts of a corps of practical and technically trained men to effect the best results.

The failure of many men to make good as traffic managers, or the inadequacy of the department itself, is due in a large measure to a lack of knowledge of the fundamental principles of organization.

EFFICIENCY

"Efficiency" is, to state it mildly, a somewhat regularly employed word. To many men it is a visionary's "catch-a-penny" or "clap-trap," without real significance in the business world. This hazy conception of the term is reflected in the number of business failures in which the inefficient human element has played "the stellar rôle."

As applied to traffic work, "efficiency" has been quite tritely defined as the greatest result by the employee or employees engaged. By "result" is meant benefit to the concern. It implies the least effort, the elimination of lost motion, the avoidance of unnecessary detail and routine.

A certain office efficiency expert states that a well-constructed office operates thru certain principles of efficiency which may or may not be conscientiously

applied, and that if success be lacking, an analysis will show the cause to be the failure to apply at least one or more of these factors.

Mr. Harrington Emerson, a recognized efficiency expert, has set forth a dozen efficiency principles which may well be considered in the organization and administration of a traffic department. They are as follows:

Clearly defined ideals.

Common sense.

Competent counsel.

Discipline.

A fair deal.

Immediate and adequate records.

Dispatching.

Standards and schedules.

Standardized conditions.

Standardized operations.

Written standard-practice instructions.

Efficiency reward.

Ideals

The first principle, that of clearly defined ideals, contemplates a definite goal. Without this, we have the sorry spectacle of the "we're here because we're here" or the "in out of the rain" traffic department or traffic manager.

The success of modern merchandising or manufacturing is contingent almost exclusively on a satisfied patronage.

"The customer is right" policy of some of our leading commercial and mercantile organizations is responsible for the development of a clientele that may be relied upon to stick thru thick and thin.

"To give the greatest dollar's worth per dollar" is an irresistible magnet as far as a great number of our citizens are concerned.

Loyalty is indispensable in any organization. Before a corps of employees can be loyal, however, it is necessary that they be definitely informed as to the ideals, the aims, and the purpose of the organization. Then they may adjust themselves accordingly and vigorously carry out the program.

As a model code of principles, the following contains numerous clearly defined ideals that may be well employed in all traffic departments:

TO BE THE BEST TRAFFIC DEPARTMENT IN THE WORLD.
TO INSIST UPON AND DEMAND OUR RIGHTS AND RESPECT
THOSE OF OPPOSING FACTIONS.

TO BE BROAD AND LIBERAL AS WELL AS AGGRESSIVE IN
OUR POLICY AND METHOD.

TO BE LOYAL TO THE COMPANY, TO OURSELVES, AND TO
EACH OTHER.

TO RECOGNIZE IN THE TRANSPORTATION AGENCIES AN
AFFILIATED INDUSTRY WHICH IN OUR INTEREST
SHOULD BE MAINTAINED AS EFFICIENTLY AS POSSIBLE.

TO PAY NO MORE OR NO LESS THAN THE LAWFUL CHARGE
FOR OUR TRANSPORTATION.

TO AVOID WASTE, TO IMPROVE PRACTICE, AND TO INCREASE
RESULTS.

Common Sense

This, as a learned professor was wont to say, is perhaps the most uncommon thing in the world. We become so imbued with theories and false notions and are so inclined to pursue a will o' the wisp that quite

frequently there is a deal of truth in the observation that "he is on his way but he does not know where he is going." It should, nevertheless, predominate in the selection of ideals, purposes, and plans that they may be readily appreciated by members of the staff and the rank and file of employees.

The law of the land is said to rest largely if not exclusively on common sense. Its absence is frequently reflected in the unreasonable rules and practices that are established by transportation agencies, and in the unreasonable demands made at times by the shipping public upon the transportation agencies themselves.

Competent Counsel

Very few men profess to be masters of all trades, and naturally instances may arise in any vocation where it is necessary to consult specialists. The cheapest thing on the market to-day is the experience of others. Adaptable suggestions appearing in trade and technical journals should be turned to account wherever feasible, and conferences of an intradepartmental and interdepartmental nature should be arranged periodically for the exchange of ideas on improved methods and practice.

The traffic clubs in the larger cities, chambers of commerce, and the like afford a very prolific field for the exchange of ideas among the representatives of contemporaneous or allied activities.

Dinners may be arranged and the services of prominent citizens secured as speakers to insure large attendances and thus stimulate a healthy growth of the organization.

Discipline

Rules for the discipline of employees with regard to deportment, office hours, and absences should be established and adhered to. Rules once made should be observed. There is no one thing that will create greater havoc in an organization than favoritism. The code established must apply to all and exclude none.

Richard (Dick) Crocker, formerly chief of the Fire Department of New York City, at one time under criticism retorted, "I never order my men to assume dangerous locations that I would not assume myself." The meat in this statement as applied to office management is "Do not establish a rule that you yourself are unwilling to observe."

The Fair Deal

Not only in the matter of discipline, office hours, and recreation but also in that of promotion, salary increases, distribution of bonuses, and especially in the apportionment of work, the fair deal is a necessity.

Not infrequently one cannot help being impressed by the fact that a certain number of employees in a traffic department may be able to clear their desks of the day's work in the allotted time while other desks in the same department are continually behind. In the latter case, more often than otherwise, it will be found that the condition is the result of short-sightedness in distributing the work, and by no means, to some shortcoming on the part of the individual.

Work should be assigned so that all members of a department have an equal amount to do, and in cases where some of the clerks finish their work before

the close of the day, they can be assigned to the relief of the accumulation on other desks.

This has a two-fold advantage in that it disposes of the accumulation and at the same time acquaints other members of the department with the duties of other desks. Under a liberal prosecution of this policy, the service can be made so attractive that the department will not be continually disrupted by desertions.

Records, Dispatching, Schedules, etc.

The necessity for reliable records, intelligent assignment of work, and rules for procedure are too apparent to require any protracted discussion.

The various methods employed in the leading traffic organizations thruout the country will be treated in subsequent chapters of this work from which the reader may select those which are best adapted to the requirements of his particular industry.

Standard Practice

Standard-practice instructions should be provided so that each employee may know exactly what he is to do. Each individual in the department should be required to analyze his occupation, to know the approximate time devoted to the major part of the work, the time engaged in correspondence, the forms used and for what purpose. An analysis of this kind from each individual will give a survey of the work of the entire department. In the event of a change, positions can be filled with the least amount of inconvenience and delay; a green man can break into the work and with very little effort become seasoned timber.

Efficiency Rewards

Cash bonuses may be given for especially efficient service. Rewards may also be established for opportune suggestions which may be employed to advantage in the department or organization.

The so-called "suggestion box" adopted by many concerns solicits from employees ideas regarding the installation of certain devices, improved methods of practice, waste elimination, etc.

These suggestions are gathered periodically, considered by a committee, and based on their merits. They may obtain first, second, or third prize, or a prize may be given for each suggestion that is adopted. This policy has the advantage of keeping the men on their toes with their eyes open to improve methods in conducting departmental affairs.

Nothing is more absurd than to allow an employee to feel that he has reached his maximum in a given capacity. The ambitious and aggressive employee—and that is the only class that it is desirable to retain—will immediately cast about to develop other openings where his prospects of advancement are not so circumscribed.

TYPES OF ORGANIZATION

In the development of our commercial enterprises various plans or forms of organization have been employed. There are recognized at this time by the foremost efficiency engineers, three distinct types of organization: (1) military, (2) functional, and (3) line and staff.

Fig. 1 indicates the military plan of organization,

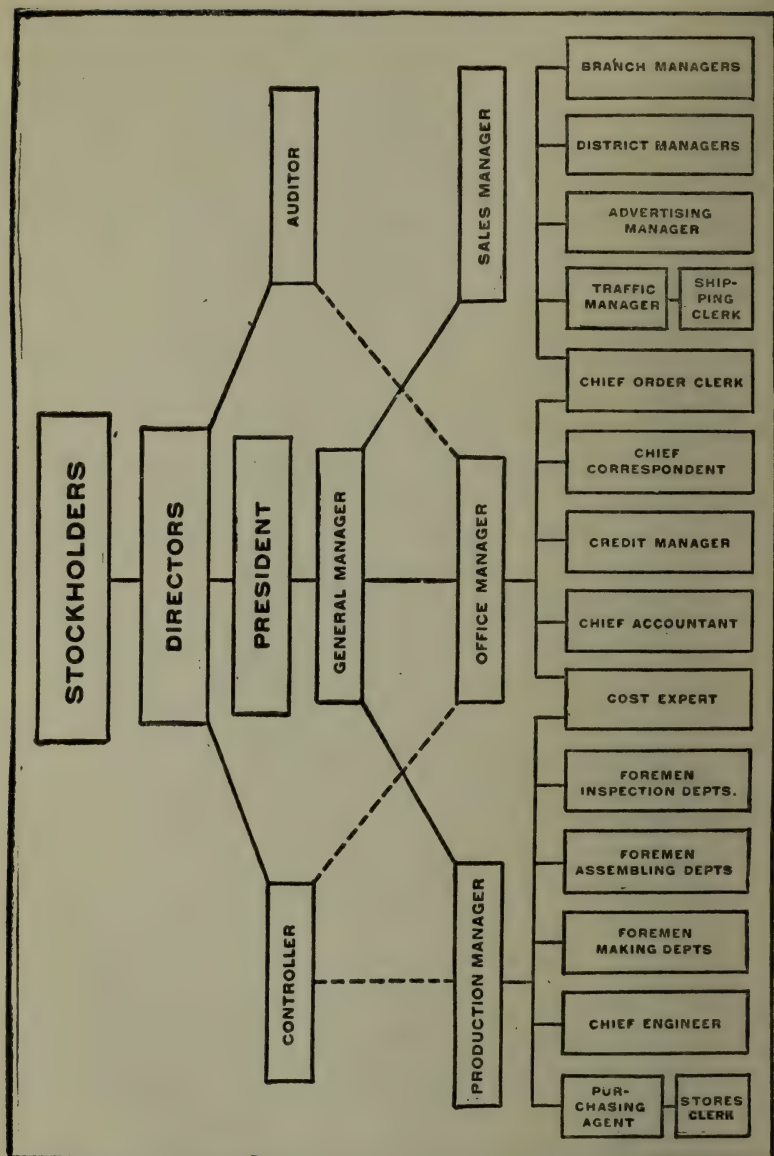


Fig. 1.—Military Plan of Organization

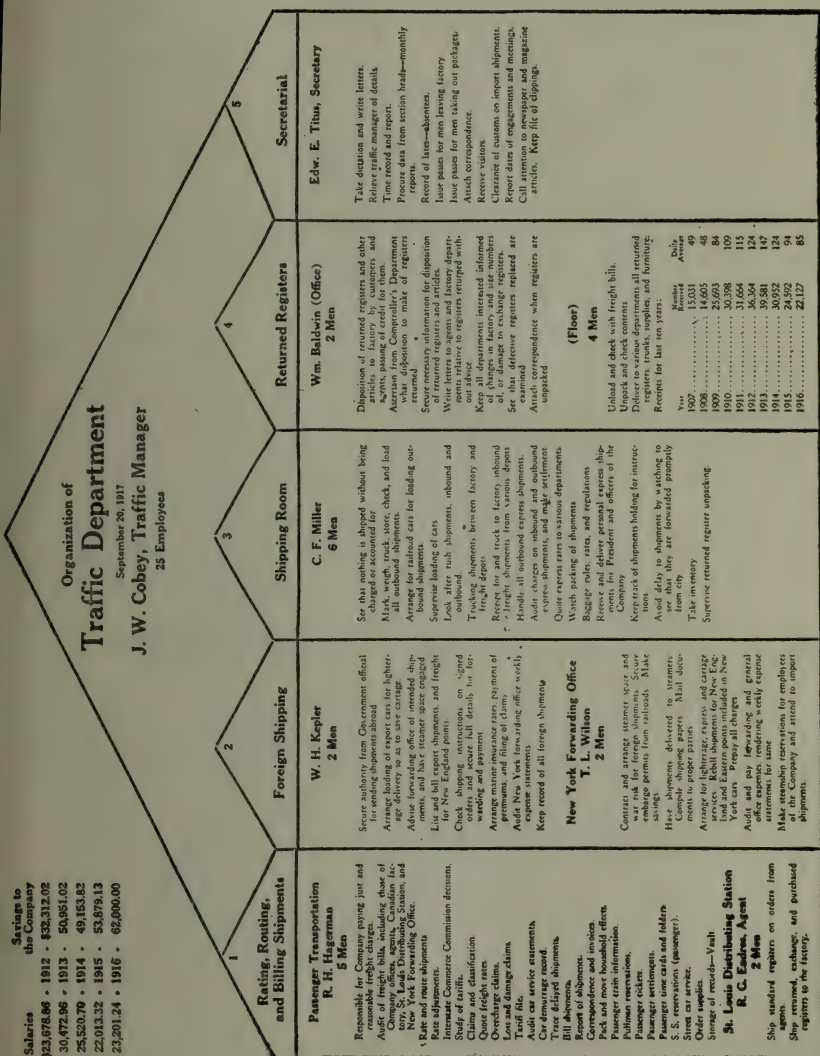


Fig. 2.—Organization Chart of National Cash Register Company

where the various department heads, including the traffic manager, are subordinate to the one-man head, the general manager. Under this plan, it is possible for individuals, prompted perhaps by a desire to curry favor, to annoy the manager with matters of minor moment and with an amount of vexatious detail. This is the chief objection to the military plan. It is avoided in a functional or divisional organization, where all matters in the respective division are passed upon by the senior clerk before being referred to the traffic manager for review or advice.

Fig. 2 indicates the executive control and functional arrangement of the traffic department of the National Cash Register Company, at Dayton, O.

It is to be noted that under this plan the work is classified in a functional arrangement and that the thirty-one men employed in this department are under the direction of the traffic manager. The work has been so planned that each employee is definitely located and consequently can develop into a competent specialist in the line of work to which he has been assigned.

In the corner of the chart, appear figures to indicate the cost of maintenance of the department, and the saving effected by its service. This point should be especially significant to organizations that still consider a traffic department unnecessary or inadvisable.

In 1912 the expenditures for salary and operation of the department were \$23,678.86, during which time it recovered for the company \$32,312.02. In 1916 the expenses had decreased to \$23,201.24, while the amount recovered had leaped to \$62,000.00.

These savings are represented by the amount recovered in the careful audit of freight charges, amounts

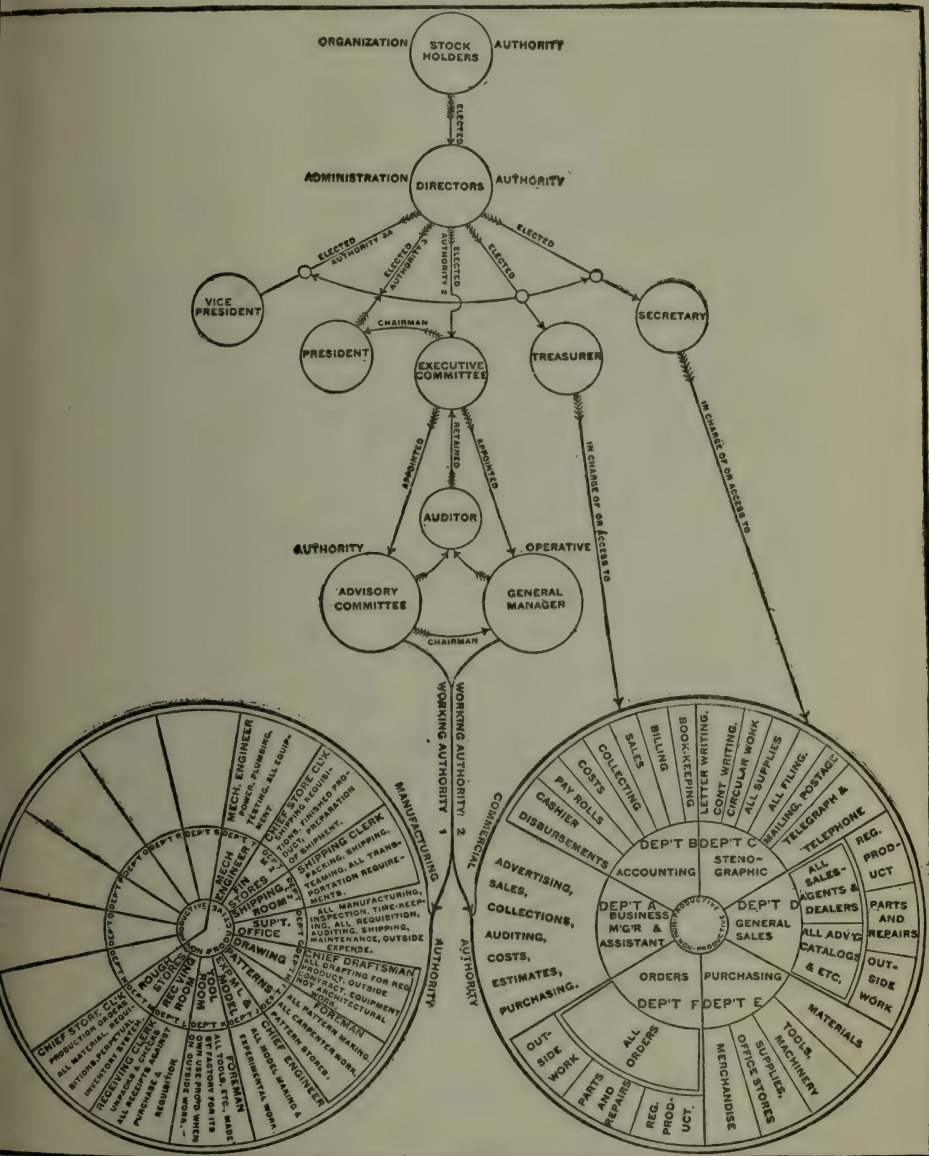


FIG. 3.—Line-and-Staff Organization

Advisory committee does the planning. Circles show workers.

involved due to the loss, damage, or destruction of property. Such items in a great many nonprogressive industries are an absolute loss because the work is delegated to a bookkeeper or shipping clerk who may possess a very superficial knowledge of transportation matters and consequently overlook all or many valid claims.

Cases are on record where traffic men have recovered for their employers in single instances sums far in excess of their annual compensation. The traffic manager who cannot offset his salary expense by transportation savings does not merit his spurs.

The line-and-staff organization (Fig. 3) is exemplified by a functional organization which is supplemented, so far as the executive control is concerned, by the services of an advisory board or consulting council, which is or are retained solely in an advisory capacity and do not have any authority in the administration of the departmental activities.

Each type of organization has its merit and its advocates. Many of the larger commercial and industrial organizations of the country have evolved composite organizations which embrace certain of the best points of each of these types. But irrespective of what plan is employed, the industry should prepare a chart indicating the plan underlying the organization, analyzing all its activities so that each employee may find his place in the departmental sun.

CHAPTER III

THE TRAFFIC MANAGER

Importance of Transportation—Traffic Manager as a Necessity—Intricacies of Traffic Work—Influence of Freight Rates—Selection of Individual—Qualifications—Early Conception of Traffic Work—Experience versus Technical Training—Specialists—Transportation Studies—Advantages of Vocational Training—Plant Location—Fuel—Supplies—Water Routes—The Traffic Manager's Duties—Classification of Line—Packing, Routing, and Rate Charts—Auditing Freight Bills—Claims—Tracing—Car Records—Bills of Lading—Rate Studies—Public Utility Complaints—Foreign Trade—Tariff Files—Tariff Studies—Departmental Accounting.

With the exception of agriculture, transportation to-day is the greatest industry of the age and is attracting the attention of the biggest men of the age. For that reason it is necessary to exercise a great degree of care in selecting the individual that is to administer to this function of work or to supervise the activities of the department.

THE TRAFFIC MANAGER A NECESSITY

The unfortunate attitude of many concerns is: "We do not need a traffic manager or a traffic department. Our shipping clerks are good enough for us." This

suggestion has often come from concerns that would be greatly affronted were it suggested that a competent accountant or an aggressive sales manager was an unnecessary factor in their organization. A competent traffic manager is, however, more often than otherwise, found to be more essential than some other department manager whose position in the concern has been taken as a matter of course.

Probably one reason why there is a misconception of the true place of a traffic manager is because his position as a part of any well-organized business is of comparatively recent origin. It may be safely stated that the industrial traffic manager became a possibility and a necessity with the amendment to the Act to Regulate Commerce, the Hepburn Amendment, which became effective in 1906, inasmuch as this amendment gave to shippers and carriers new privileges and new responsibilities.

The Act also imposes obligations on the shippers and the carriers which may not be disregarded either thru ignorance or by design without incurring heavy penalty. These penalties, in doses of \$5,000 or more for each offense, are designed to cool the ardor of the most enthusiastic tariff slacker.

Previous to this time the representative of an industrial concern was often rated by the ability to secure special concession from the carrier. In many cases rate rules and regulations were not published and filed with the Interstate Commerce Commission at all, and in others where the provisions were filed there was absolute disregard of them. The amendment cited, however, is proving an effective antidote to this practice.

INTRICACIES OF THE WORK

The intricacies surrounding the assembling and distribution of goods are so numerous and varied and so interspersed with legal technicalities and obligations that it is clearly beyond the scope of the uninitiated to deal with them. And yet unfortunately in a great many cases the supervision of such matters has been vested in a shipping clerk of only mediocre talent.

Some time ago in an issue involving the construction of freight rate schedules in a proceeding in his court, Judge Kenesaw Mountain Landis, of the United States District Court at Chicago, had occasion to remark that "the publications involved in the proceeding were so ambiguous and so technically phrased as to be clearly beyond the comprehension of the laymen and to necessitate the services of experts to determine the effect of their phrasing, and the opinions of these experts were not always in accord."

The traffic manager of a glass manufactory in West Virginia was asked at a hearing before the Interstate Commerce Commission what effect he thought freight rates had in the securing of business by an industrial organization.

He replied that prospective customers often looked up the rates of freight on a specified article from various shipping points and when they found that rates from a particular point were higher than the rates from some other point, the manufacturer working under the disadvantage of the higher rates frequently was not offered an opportunity of even making a bid or quotation tho he might be disposed to equalize in his selling price the disadvantage of the higher rates.

SELECTION OF THE TRAFFIC MANAGER

Qualifications

The usual rules governing the selection of the officers or executives for an organization should be applied to the selection of the traffic manager. The mental, moral, physical, financial, and social qualifications of the prospective candidate should be analyzed in accord with the essential factors as exemplified in Fig. 4.

The predominating qualification at all times is the mental equipment of the individual. An efficient traffic manager is the product of intensified training or technical education, and his education is really never completed, as he must continually study and analyze the new problems that are continually arriving.

The traffic man must have an intimate knowledge of manufacturing costs, manufacturing processes, commercial geography, and trade customs thruout the world. He must be familiar, to some extent, with legal procedure, since many of the legal provisions regarding transportation of goods are becoming more and more perplexing to the shipping public, and the obligations of carriers and shippers are becoming more and more stringently drawn, and substantial penalties follow their nonobservance.

He must have an intimate knowledge of rates and tariff construction, the application of freight schedules, the principles underlying rate construction, and classification procedure, since to a large extent these are his trade tools. Above all he must have ability to make a survey of the firm's output from a transportation standpoint, to discover existing discriminations, and to eliminate them thru the application of

Examine
Yourself.How Do
You Stand?Points to Consider
When Hiring an Employee

Compiled by the members of the R. C. R. Officers' School.

Mental	Moral	Physical	Financial	Social
Ability	Character	Health	Thrift	Standing in the community
Education	Loyalty	Appearance	Debts	Associates
Knowledge	Enthusiasm	Strength	Credit	Habits
Experience	Frankness	Endurance	Outside interests	Sociability
Judgment	Honesty	Temperate living	Economy	Tact
Foresight	Habits	Recreation	Ambition	Conversation
Precision	Will power	Habits		Manner
Decision	Discipline			Moderation in eating and drinking
Concentration	Fair dealing			Ambition
Originality	Truthfulness			
Ambition for mental improvement	Reliability			

Additional Points Brought Out by Dean Schneider.

Are you mental or manual, directive or dependent, original or imitative, social or self-centered?
 Are you an indoor man or an outdoor man? Are you a man of large scope or a man of small scope?
 Are you settled or roving, logical or illogical, accurate or inaccurate, rapid to co-ordinate facts or slow to co-ordinate facts? Are you dynamic or static?

FIG. 4.—Points to Consider When Hiring an Employee

the principles of correct traffic procedure, reducing to a minimum the industry's transportation costs, both on inbound and outbound tonnage.

The traffic manager must be broad enough to meet with the manager and heads of other departments in his business and to counsel with and advise them of transportation matters concerning the business. He must keep in close touch particularly with the managers of the order department, the purchasing department, the sales department, the production department, and the stock department, informing them of adverse transportation conditions, such as slow movement, congestions, etc.

The National Cash Register Company has an Advisory Board made up of thirty-three members, consisting of heads of various departments and the officers of the company, which meets every Monday morning to discuss matters concerning the respective departments and, in this meeting, all difficulties are ironed out and one is permitted to discuss his problem without fear of antagonism or prejudice in any way.

This is a service that is far above the comprehension of the average shipping clerk, the man to whom a great many of our so-called "progressive" concerns intrust their shipping. There is just as much logic in assuming that a shipping clerk can undertake a work of this kind as there is in assuming that a bookkeeper would be able to act as a certified public accountant, or that an elementary law student could preside on the bench without the necessary technical training that precedes elevation to this station.

One concern that prided itself on its general efficiency was quite chagrined when confronted with the fact that its shipping clerk had for years been

packing a certain line of its products in boxes when it could have been shipped in bundles just as well. The boxed articles carried a much higher transportation rate than the articles in bundles wired together, to say nothing of the expense of furnishing the boxes. It was estimated that thru this one instance alone the concern had lost something in the neighborhood of \$40,000 in providing the containers and paying the higher transportation rate.

EARLY CONCEPTION OF TRAFFIC WORK

It is true that long prior to 1906 industrial concerns were in the habit of having someone to look after their transportation affairs. Mr. B. H. O'Meara, in writing to a traffic publication, stated that in 1878 Mr. Wm. F. Merritt left the employ of the Chicago & North-Western Railway Company to handle the transportation work of the Best Brewing Company (now the Pabst Brewing Company). That Mr. Merritt's work at that time was very superficial compared with the work of the modern traffic manager is clearly shown by one statement made by Mr. O'Meara to the effect that he (Mr. Merritt) frequently spoke of the system of shipping, routing, checking expense bills, and the like that he introduced.

Until it is appreciated that the traffic manager must not only know how to pack and route shipments, file claims, and trace shipments, audit freight bills, and arrange for equipment, but must also be of assistance to the selling department, to the credit department, to the advertising department, to the purchasing department, and to the manufacturing department—in fact

to all other departments of a well-organized concern—his real place has not been comprehended.

EXPERIENCE VERSUS TECHNICAL TRAINING

It is perhaps well at this point to introduce a word or so concerning the merits of practical experience versus technical training. A great many prospective employers of traffic help use the word "experienced" or the phrase "with railroad experience" with little or no conception of what the term may imply, and at the same time discount the training that a man may receive thru vocational study.

One of the leading transportation companies of the country issues periodically a leaflet showing the names of the men that have been in their service for a sufficient length of time to warrant them in pensioning these employees and transferring them to their "roll of honor." These men in many cases have had fifty years' experience with the road and as a consequence they have "railroad experience to burn." It is doubtful whether the services of such men would be acceptable in any progressive traffic department.

There are many men engaged in railroad service whose training has been along departmental or divisional lines with a result that they have become quite competent in the discharge of their duties in that field, but they are uninformed on matters coming within some other field of transportation work with which they have not been connected.

It is not uncommon to find unusually bright men acting as loss and damage claim investigators for the common carriers; likewise exceptionally well-informed quotation clerks who have an extensive knowledge of

tariff publications, their application, and of rates in general; but these men know little outside of these specific fields.

The traffic man must know all the details surrounding such work and he has been very aptly likened unto the ship's cook, in that "he is in everyone's mess and in no man's watch."

SPECIALISTS

Where the activities of a department are such as to require the services of a number of men, the specialist may then be brought into the department and may perform his function under the direction of a competent traffic manager. Naturally the number of men required to administer efficiently to the needs of the department varies according to the volume of shipping done by the respective concern.

TRANSPORTATION STUDIES

As in the case of other individuals, there is a limit to the amount of work that the traffic manager can perform. Each order of goods or each selling transaction presents a transportation study that must be analyzed to determine the most advantageous and economical way of shipping and the agencies to employ.

One of the foremost railroads conducted an exhaustive test as to the time required in ascertaining the rates applicable on the shipments offered them for transportation; it was found that in determining those rates of ordinary difficulty, over fifteen minutes was consumed as an average by intelligent rate men.

When it is understood that railroad employees at

the principal stations are required to rate hundreds and hundreds of shipments daily, in some cases an individual's aggregate exceeding two thousand, the opportunity for mistakes and the necessity for careful revision of transportation charges at the hands of the industry become apparent.

Therefore, as long as the traffic needs of the industry can be efficiently administered by one man, well and good. When, however, his time is so occupied or he is so driven as to be denied the opportunity of effectively supervising his work, he should be given such assistance as he requires, and at all times the department, irrespective of what it may cost, should be viewed as an asset and not as a liability.

ADVANTAGES OF VOCATIONAL TRAINING

The advantages arising from vocational training thru resident and home-study courses are being recognized in all fields of endeavor. Comprehensive courses in matters pertaining to scientific management have been evolved. Based on observations of hundreds and hundreds of students, the graduates of such schools compare well with the man who has obtained his training entirely by experience, and, in many cases, prove his superior.

This is due in a large measure to the fact that these courses strip the subject of all unnecessary detail. The student is required to master fundamentals and principles and is not confronted with the daily routine of the railroad or the industrial traffic department man. Another point of considerable moment is that consciously or unconsciously the railroad graduate acquires a railroad bias in his analysis of transportation

problems and quite frequently he will construe to the benefit of the carrier a point that is rightly the shipper's, even tho he may be an industrial employee.

PLANT LOCATION

In these days when service is such an important factor in the development of business, the location of a plant from the standpoint of transportation facilities for the output of a concern is a matter of very vital importance. With the very formation of an industrial enterprise, a specialist is needed to make a thoro canvass of all the transportation conditions before deciding on a location for the plant.

It is stated that prior to the development of Gary, Ind., as one of the leading steel centers of the world, thousands of dollars were expended from a traffic standpoint in making a survey of what rates would in all probability obtain into and out of that plant on fuel, crude materials, and finished products of various kinds. The forecast of this survey was borne out by the result following the subsequent establishment of the industry at that point.

There are two points to be considered in judging transportation. One is rates and the other, the kind of service given, such as time consumed in transit, the number of transfers involved, and the customers' convenience at destination.

To handle such matters adequately, the services of a competent traffic man will be required. His judgment on the location of an industry from the standpoint of securing the raw material and disposing of the produce is invaluable. He will have to answer a number of questions: (1) Does this location offer

the most favorable rates? (2) Has it the best available transportation routes from the sources of supply for raw material? (3) Does it offer alternative routes to be employed in cases of unusual congestion? (4) Will the industry be so dependent on a single carrier as to be at its mercy in rate adjustments?

In our densely populated manufacturing districts or in commercial areas there are many instances of ill-advised plant location. In some cases the plant is so far from freight terminals that the trucking cost assumes formidable proportions. Rail transportation would make this a negligible element, besides giving the enterprise opportunity for expansion and development.

FUEL AND SUPPLIES

Fuel supply is a question of increasing importance. If a particular kind of coal or coal from a particular region must be used, questions of rate adjustments must come in for careful consideration.

WATER ROUTES

Coal is a commodity which is well adapted to transportation by water, and transportation rates on coal by water are extremely low. The location, therefore, of a plant on a river or lake might well be warranted by the money saving and convenience that arise from securing coal, or other raw materials, by boat.

The government at the present time is advocating the development of our inland waterways. It is interesting to note that the railroads have lent their full support to this measure. Consequently, several large industrial concerns in the Middle West are now employ-

ing tow boats and barges in obtaining fuel and crude materials for their work.

There is also the interesting instance of a far-sighted traffic manager of Chicago who prevailed on his concern to purchase several coal mines shortly after the outbreak of the European war. Altho its competitors are paying prohibitive prices for fuel, his concern has not felt the increase of this staple to an appreciable degree.

THE TRAFFIC MANAGER'S DUTIES

The following classification summarizes the more important matters in which the traffic man must be proficient.

Classification of Line

This contemplates (1) the analysis of the firm's output from a transportation standpoint; (2) the standardizing of descriptions to be used on shipping papers, bills of lading, and other documents in conformity with the various classifications promulgated by the carriers, rate schedules, and the like; (3) the determination of the style of packing for different articles to insure the proper application of the lawfully established charge.

Packing Specifications

Many classes of goods take a varying charge when put up in packages of different forms for transportation. For the convenience of the shipping department, a chart must be prepared showing what class of package—that is, box, crate, barrel, or bundle—is to be used for certain lines of goods.

Route

A routing chart may be utilized by the shipping department in reducing complaints about the delivery of goods. It will show the preferred route between representative centers thruout the country, together with a package-car route guide indicating days in transit, and number of transfers involved.

Rate Charts

The department should be provided with tables or charts indicating the current rate of freight on goods of a given kind so that f.o.b. destination costs may be readily determined when desired. Armed with this information, salesmen in the field can quote a delivered price to prospective customers.

Rate Quotations

The traffic man will prepare rate quotations for the use of (1) the sales department, (2) company agents at outlying centers, (3) prospective customers, and (4) the purchasing department.

Tariff Study

The traffic man will study existing tariffs and reissues as they are made from time to time to anticipate the effect of advances in rates and changed rules or regulations on the firm's line of trade, so that the industry may at all times be protected on contracts calling for future delivery of goods f.o.b. certain destinations.

Auditing Freight Bills

There must be a revision of the freight charges appearing on the freight bills to verify (1) the rates assessed for transportation, (2) the weight on which charges are computed, and (3) the charge.

The bills of the various transportation agencies, express companies, railroad companies, steamship lines, traction systems, and others engaged in transportation should be so treated.

Loss and Damage Claims

Two classes of issues must be handled: loss on account of the carrier's failure to deliver the shipment; loss on account of damage to the shipment while in the carrier's hands.

Tracing Shipments

It is a traffic man's duty to inquire by letter, telegram, or telephone the present location of shipments unduly delayed in transit, which consequently require an expedited service.

Car Record

The department should have a record of all cars ordered or received, indicating the date and time placed at designated location, when loaded or unloaded, and the amount of demurrage, if any, accruing under average agreement or straight rule.

Bills of Lading

The traffic man is responsible for the preparation of bills of lading indicating the route over which the

shipment is to travel, the proper description of the shipment to obtain the benefit of the lowest legal rate, identification marks, and other essential information necessary to the satisfactory completion of the contract of carriage as expressed in the bill of lading conditions.

Rate Study and Adjustments

It will be advisable to maintain a statistical department to study various rate adjustments; to develop such discriminations as may exist; and to correct them by correspondence with the carriers or by personal appearance before rate associations if possible; and to resort to public or federal utility commissions if the controversy cannot be amicably adjusted.

Railroad Settlements

All freight bills must be verified as to accuracy and passed to the treasurer for check or voucher. When the industry is on the carrier's credit list and is entitled to make periodical settlement, incorrect bills may be returned to the transportation company for adjustment prior to payment.

Public Utility Complaints

The necessary evidence and exhibits involved in rate cases before the Interstate Commerce Commission or state public utility commissions must be prepared by the traffic man. Issues involving intrastate traffic not subject to the jurisdiction of the Interstate Commerce Commission are taken up with the state boards; the procedure does not differ greatly from that employed by the Interstate Commerce Commission.

Foreign Trade

Some industries will require the perfecting of foreign trade arrangements direct or thru export or import houses for the movement of export or import shipments, the quotation of rates, and the securing of space on ocean-going vessels.

Tariff Files

An adequate file of transportation company rate schedules must be maintained, new issues appearing from time to time must be procured, and those issues and supplements for which the concern is listed on the mailing lists of the various associations and tariff-issuing agents must be accurately filed.

Local Transport

The organization depends upon the traffic department for the supervision of truckmen and teamsters; the arrangement of loads so that the efficiency of the industry's short haul may be maintained at a high pitch; the establishment of a motor truck service within a certain radius of the industry for the delivery of shipments to railroad terminals and to local customers.

Departmental Accounting

Various accounts may be kept for the convenience of the department indicating the charges paid on inbound or outbound shipments by periods, number of claims filed, number of claims collected, number of claims pending or unadjusted, declined or held in suspense, and the amounts which are involved.

Such accounts will show the expense incurred in maintaining the department, and the recoveries effected to offset this expense. The efficiency of the department can be measured.

The foregoing is only a general survey of the traffic manager's qualifications and his immediate duties. Later chapters of this work describe in general the relationship of the traffic department to the other departments of the concern and emphasize the necessity of employing competent, trained men to administer industrial transportation matters.

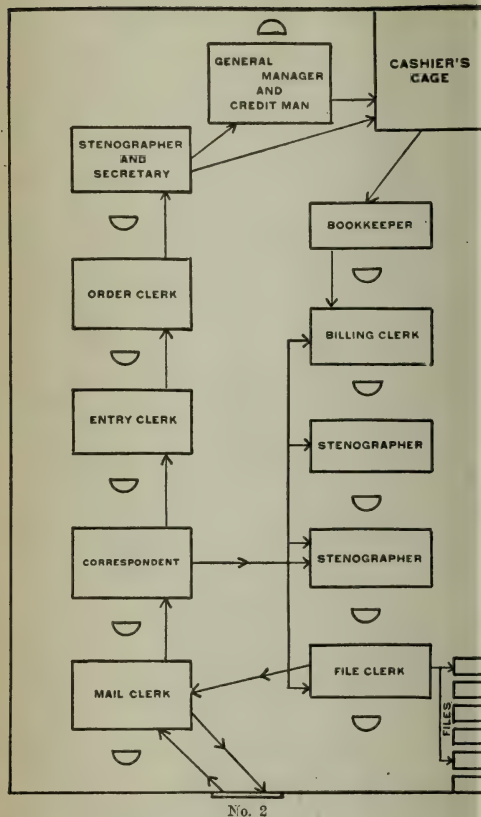
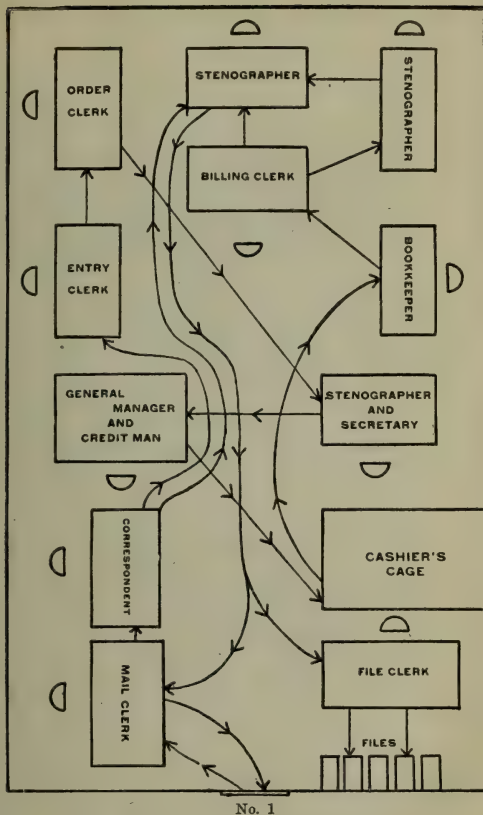


FIG. 5.—Office of a Sales Force before Arrangement and after Planning and Routing Work

Note waste motion in No. 1 and orderly sequence in No. 2—the result of planning. Note also the position of the general manager with reference to the supervision of the force.

CHAPTER IV

LAYING OUT THE OFFICE

Space—Physical Conditions—Influence on Output—Floor
Insulation — Furniture — An Efficiency Factor — Desks
versus Tables—Correspondence Files—Index Systems—
Tariff Cabinets—Live versus Dead Issues.

The traffic manager should possess the necessary ability to lay out an office intelligently. A great many do not, however, as evidenced by the number of departments whose layout does not follow definite and systematic lines.

After making a judicious selection of equipment, appliances, and supplies, they should be so arranged in the department that their use may entail the least lost motion.

ACCESSIBILITY OF RECORDS

Not infrequently, in some of the large traffic offices, the equipment is so arranged that a man has to leave his desk on one side of the room and make a journey to the other side in order to get information for which he has frequent use. Obviously, records that are in continual demand should be placed as near as possible to the employee using them.

Fig. 5, while designed primarily as a chart dealing with general office organization, illustrates the results that follow careful planning in laying out the office

and placing the worker. Long trips from one end of the office to the other are eliminated.

COÖRDINATE WORKERS

Likewise, workers of a class should be put together. The rate clerk, the quotation clerk, and the overcharge investigator have more frequent occasion to use the tariff files than other employees, and should therefore be placed in close touch with them.

Fig. 6 shows the arrangement in the office of a Chicago traffic manager who analyzed the functional work of his subordinates and placed together those engaged in corresponding work. The general efficiency of the department can be greatly enhanced by using intelligence in regard to this feature.

SPACE

Even tho space is expensive, the traffic department should not be slighted. Sufficient room must be furnished to accommodate numerous records of the department and to enable each worker to carry on his work without crowding and interruption.

Certain measurements have come to be well defined. For example, aisles should be three feet wide at least, and preferably three and one-half feet. Where employees work back to back, four feet should be allowed between desks. In front of filing cabinets or tariff files an aisle five feet wide enables anyone to pass even when an operator has a drawer fully extended or others are using the files. The space required for each employee, including his desk chair and aisle space, is from 110 to 125 square feet.

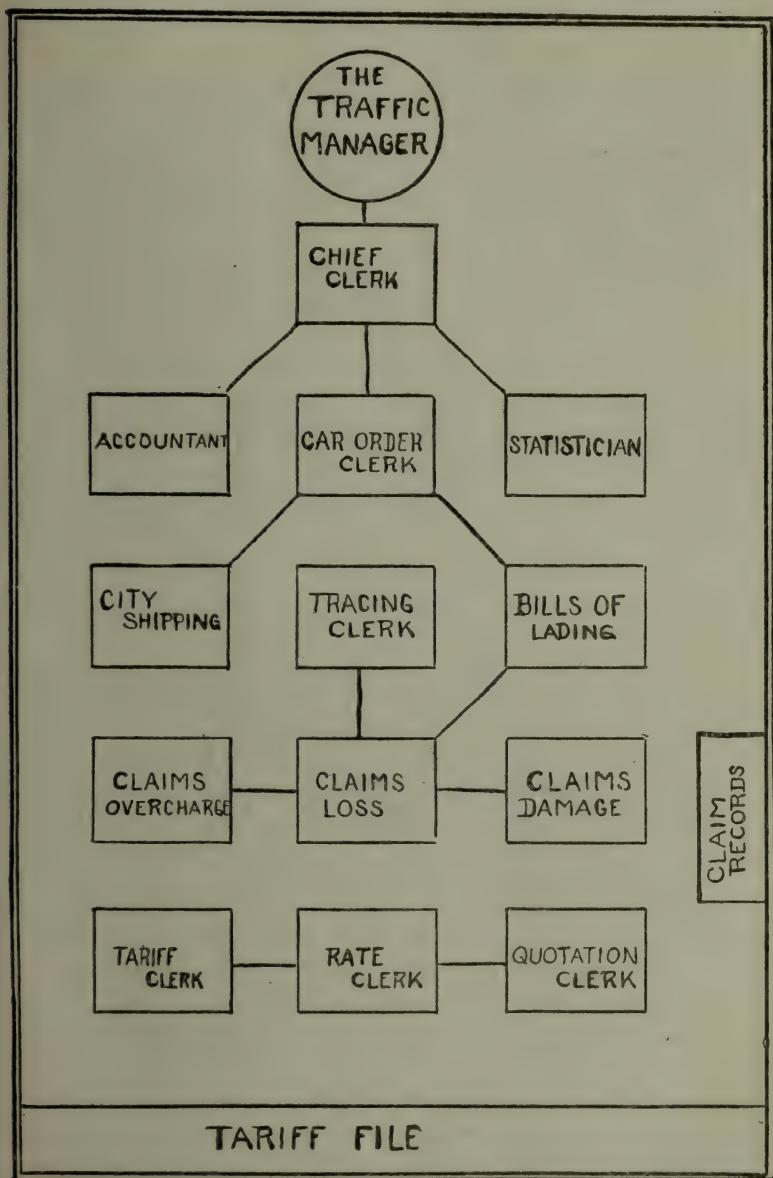


FIG. 6.—Layout of a Traffic Department

PHYSICAL CONDITIONS

Lighting, heating, and ventilating influence greatly the character and quantity of work turned out. Experts have proved that the efficiency of an office force can be more than doubled by having the physical conditions correct.

FLOOR INSULATION

Unnecessary and distracting noises are avoided by floor insulation of battleship linoleum, cork carpet, rubber runners, or carpeting. For sanitary reasons one of the first three named seems preferable. Where expense is an item, only the aisle spaces need be so treated.

FURNITURE

A great many applicants for the position of traffic manager with a concern that has heretofore not maintained such a department immediately kill their prospects by suggesting that it will be necessary to purchase a formidable array of expensive office equipment. There are many of the old-school business men who are not fully convinced of the soundness of investing in the traffic manager himself, to say nothing of added expense of this kind.

The traffic man if properly trained can, of course, get along without any equipment other than a desk or chair and can rely on the accuracy of the railroad quotations for his rates, his friends in railroad services for favors, and his store of knowledge in the disposition of certain issues with which he may be confronted.

An Efficiency Factor

This is a "penny-wise" and "pound-foolish" view to take of the situation and where the department is going to assume considerable proportions involving the efforts of many employees, necessary provisions should be made for the purchase of adequate and convenient facilities. No factor will contribute more to the employees' ability to deliver the goods.

Tables versus Desks

Substantial tables of good quality are recommended for the clerical force rather than pedestal desks; they are more economical, more sanitary, may be moved with less effort, and prevent the accumulation of correspondence and personal belongings. The work of each employee is in the open, and the opportunity to lose sight of important matters is minimized. Unfinished business can be laid in wire trays.

CORRESPONDENCE FILES

For the accommodation of correspondence, any standard vertical file will prove adequate. For durability, those of steel are recommended; these may be purchased in units, three tiers or over in height, and can be added to from time to time. A file containing drawers furnished with roller bearings is preferable. They can be opened or closed with convenience, tho filled with heavy correspondence.

INDEX SYSTEMS

Owing to its elasticity, the card-index system for correspondence files is the order of the day. It affords

an opportunity for correcting errors and for cross-indexing a subject under its various ramifications; it is convenient to use. Preferably a general departmental index of all correspondence files should be maintained.

Cross references are desirable. For example, the United States War Tax Law would be indexed under U—United States, under W—War, under T—Tax, and under L—Law.

TARIFF CABINETS

Tariff cabinets of various kinds are designed by different manufacturers. Where the Tengwall system of filing tariffs is employed, wooden shelving to accommodate the binders can be prepared by any carpenter.

The subject of filing tariffs will be developed in detail in a later division of this work.

LIVE VERSUS DEAD ISSUES

In both correspondence and tariff files a periodical check should be made to separate "the sheep from the goats" and to leave the expensive office equipment free to accommodate current material.

In many phases of traffic work there is no further use for correspondence, once the incident is disposed of. On the other hand, correspondence on subjects continually agitated should be readily accessible to investigators, even when files have been temporarily removed. Each clerk can be represented by cards of a given color. When he removes a file, he leaves in its place one of his cards.

The reissue of certain publications and the cancel-

lation of those heretofore in effect cause considerable change in the tariff file. It is desirable to transfer the dead files and superseded publications to other places for safe keeping and subsequent reference. Less expensive transfer cabinets and binders are employed for this purpose.

The numerical arrangement of the dead file corresponds with that of the live file, so that if a file or tariff is needed in a particular instance it may be readily located.

It is not wise to dispose of cancelled tariffs within less than two years, preferably five, after they have been cancelled. The overcharge claim investigator frequently handles cases predicated on old issues and must refer to these cancelled tariffs to make proper reference on claim papers.

CHAPTER V

THE LIBRARY OF THE TRAFFIC DEPARTMENT

Trade Publications—Atlas—Shipping Guides—Package Car Guides—List of Prepay Stations—*Official Railway Guide*—Tariffs—Classifications—*LaSalle Traffic Library*—*Traffic World*—*Black's Law Dictionary*—Digest of Commission Decisions—*Claims between Shippers and Carriers*—*Loss and Damage Claims*—*Hutchinson on Carriers*—*Fuller on Interstate Commerce*—Interstate Commerce Commission Decisions — State Commission Reports — Miscellaneous Works.

Many of the publications upon which the traffic must depend for information are distributed gratis by railroads or associations. The subscription price of others is moderate. Most of the absolutely necessary books of reference are not prohibitive in price. The extent of the office reference library will depend upon the industry's special needs, and upon its resources. The investment invariably results in the increased efficiency of the employees, and this more than offsets the expense involved.

A nucleus of a few volumes may be added to from time to time. The following sections describe briefly some desirable publications, and give short digests of a few selected works. Certain publications and books of reference are indispensable. Others simply make the work more convenient and more accurate.

TRADE PUBLICATIONS

The progressive man can greatly enhance his general ability by regularly reading one or more of the trade journals bearing on his firm's activities and his special field in particular. These technical and trade magazines should be found in the general library of the industry, or, if a publication relates purely to departmental activities, it should pass from clerk to clerk in that department, and then be filed for permanent reference.

The Traffic World, published by the Traffic Service Bureau of Chicago, Ill., is the journal devoted exclusively to traffic work. It reproduces in substance all of the decisions of the Interstate Commerce Commission, besides offering columns of special interest to traffic men.

The Railway Age is devoted especially to problems of railroad operation. Nevertheless, it gives considerable publicity to shipping reforms, court decisions, Interstate Commerce Commission decisions, and construction news.

Both publications are weekly issues and find a place in practically all well-administered traffic departments.

ATLAS

An atlas is virtually indispensable, since many questions come up which involve the exact location of a given point and its accessibility to various transportation agencies.

Rand McNally & Company, of Chicago, publish a very acceptable commercial atlas. It is arranged by states, with an alphabetical list of towns under each state. It shows the population of each town, its

geographical location, the railways or transportation companies serving it, the express company maintaining an agency there, together with other information of vital import.

SHIPPING GUIDE

Sometimes, in addition to determining the geographical location of a town, it is necessary to know upon what division of a particular railroad it is located. *Bullinger's Postal and Shippers Guide*, published by Bullinger & Company, New York, indicates the location of towns by road and division, also inland points served by navigation companies, and gives the addresses of various forwarding companies and navigation companies thruout the country. Another very effective publication of this kind is the *Shipper's Guide*, published by the Shipper's Guide Company, Chicago, Ill.

"FREIGHT RATE GUIDES"

Realizing the advantages that accrue from having a convenient or ready reference book from which to obtain approximate rates of freight, various concerns of different locations in the country have inaugurated the *Freight Rate Guides*. This gives the rates of freight from selected points of origin, such as Chicago, St. Louis, or other representative base point, to various destinations thruout the country.

While these books are not official in the sense that they are recognized by the Interstate Commerce Commission or the various state commissions in rate cases

or by the railroads themselves as the proper authority to substantiate claims for overcharge, they well serve their purpose—a convenient and ready reference. An example of this class of guide is found in *Hartman's Western Freight Rates*, published by the W. J. Hartman Company, Chicago, Ill.

PACKAGE CAR GUIDES

It is the custom for chambers of commerce, or similar organizations, to publish frequently package car guides, showing package car service maintained by the carriers serving their respective cities, the destination of the package cars, the days in transit, the number of times transferred, and other information of similar import. Such volumes are exceptionally handy in routing less-than-carload shipments.

LIST OF PREPAY STATIONS

There is not a sufficient amount of business at all stations on the common carriers to warrant the maintenance of an agent to take care of the freight at such points. These stations are commonly referred to as nonagency stations, and the carrier requires that shipments to them be prepaid.

Instead of referring to the railroads for information on nonagency stations, shippers will save time, and in some cases trouble and delay, by using *List of Prepay Stations*, published by F. A. Leland, St. Louis, Mo. It indicates all railroad stations and their facilities for handling freight in carloads or less than carloads, whether they be agency or nonagency stations.

"THE OFFICIAL RAILWAY GUIDE"

The Official Railway Guide is issued by the National Railway Publication Company, 75 Church St., New York, N. Y., and aims primarily to serve the traveling public. But because it gives mileages and indicates the distance between more important stations, it is of particular value to the traffic man. Many of the so-called "distance tariffs" call for the determination of the distance between points in applying the scale of rates that may be established for such traffic. In a great majority of cases this volume suffices and obviates the necessity of maintaining a complete file of all the distance and mileage tables available.

TARIFFS

In a later section of this work, the various methods of filing tariffs, and the devices used will be discussed.

The most efficiently administered industrial traffic organizations maintain rather complete files of these publications, and are not compelled to rely on railroad quotations exclusively for information on current rates of transportation.

CLASSIFICATIONS

These publications must be secured from the respective classification organizations as indicated below:

Official Classification Committee

143 Liberty St., New York, N. Y.

Western Classification Committee

Transportation Building, Chicago, Ill.

Southern Classification Committee

Grant Building, Atlanta, Ga.

These issues are not distributed gratis as in the case of tariffs and other transportation schedules, but are sold to the shipping public on the basis of per annum subscriptions, such subscriptions entitling the subscriber to the classification proper that may be issued, and such supplements as may be issued from time to time during the life of the subscription.

“EXPORTER’S ENCYCLOPEDIA”

The manufacturer who has any amount of foreign business or expects to go into the foreign field should obtain a copy of the *Exporter’s Encyclopedia*, published by the Exporter’s Encyclopedia Company, 80 Broad Street, New York City, N. Y. This volume gives all the particulars and regulations applying on shipments going to foreign countries.

“LASALLE TRAFFIC LIBRARY”

The *LaSalle Traffic Library* covers the field of traffic very thoroly. The material contained in these volumes is used primarily in connection with the course in Interstate Commerce and Railway Traffic work given under the auspices of the LaSalle Extension University of Chicago, Ill. It covers the entire field of industrial traffic management, describing at some length various plans employed in making rates in different sections of the country. Then follows a thoro exemplification of the many legal requirements obtaining in the adjustment of rate cases and loss and damage issues.

The principles of correct traffic procedure are treated in detail. Their application as applied to actual ship-

ments, with the savings effected, is illustrated thruout the work. Such examples may be employed to advantage in the development of the efficiency of the industrial traffic department.

To the sixteen volumes comprising this work may be added others by authorities of some standing in the traffic world.

“BLACK’S LAW DICTIONARY”

The phraseology employed in connection with the transportation interests and regulations are of such a peculiar nature as to bewilder the layman and to convey little or no intimation of their meaning and effect.

Touching upon this point, Mr. Balthasar Meyer, now Interstate Commerce Commissioner, says in his work on *Railway Legislation in the United States*:

In the code of per diem rules adopted by the American Railway Association the first page is devoted to definitions. Terms like “home car,” “private car,” “home route” are carefully defined. We may look in vain for similar definitions of terms used in railway laws in the United States. Neither the Interstate Commerce Laws nor the laws of the state contain adequate definition of terms like “railway,” “thru traffic,” and “proportional rates.”

It may be a difficult matter to formulate a definition of technical terms applied in matters relating to railway traffic, yet for the sake of clearness and uniformity, definitions should be incorporated in our laws. At present such definitions are found only incidentally in the decisions of courts and of our commissions.

In the laws of England and of the British colonies the custom of defining the terms employed in the law appears to be well established. Canadian law, for instance, defines such terms as "company," "coach," "department," "goods," "highway," "lines," "maps," "plans," "near," "owner railway," "toll," "tariff," "the working expenditure," "the undertaking," and the like.

Necessary legal terms can be found in *Black's Law Dictionary*, published by the West Publishing Company, while the *Traffic Glossary* of the *LaSalle Traffic Library* defines the technical terms and phrases applied to railway traffic work.

INTERSTATE COMMERCE COMMISSION DECISIONS

These are the orders of the Interstate Commerce Commission entered in connection with various rate cases or transportation problems that have come before it for review. They are issued to the public first in the shape of leaflets, and when a sufficient number of leaflets have been issued, in bound volumes, the bound volumes as a rule running two or three numbers behind the unbound leaflet form.

Subscription for either the bound volume or the leaflet may be entered with the Superintendent of Public Documents, Washington, D. C., at a very nominal expense.

The Superintendent of Public Documents is not in a position to furnish earlier bound volumes up to and including twelve. Volumes 1 to 12 inclusive are controlled by the Lawyers Coöperative Publishing Company, Rochester, N. Y., and these early volumes must be secured from that source.

DIGEST OF COMMISSION DECISIONS

The opinions emanating from the Interstate Commerce Commission regarding complaints laid before it are in some instances very voluminous, and full of irrelevant detail. It has been the custom of the legal fraternity to condense into short paragraphs the principal points of these decisions.

Such a digest of the decisions of the Interstate Commerce Commission from the time of its inception, 1887, to 1906 can be found in a single volume, *Digest of Decisions under the Act to Regulate Commerce*, by Mr. E. B. Peirce.

A rather elaborate table of contents and index form a complete reference to the contents of the volume. By familiarizing oneself with the classifications, cases parallel to those confronting an industry may be located at will.

Since 1906 summaries of these decisions have been published by H. C. Lust & Company, of Chicago. In addition to the bound volumes covering certain periods they offer a supplemental service in the shape of a paper-covered volume issued quarterly each year, giving the digest of Commission decisions appearing for that period.

"CLAIMS BETWEEN SHIPPERS AND CARRIERS"

Merriam's *Claims between Shippers and Carriers*, published by the LaSalle Extension University, is an extensive work and includes a digest of all American court decisions on loss or damage issues between shippers and carriers.

Not infrequently the shipper will engage counsel

to prosecute an issue for him when he has no case at all; and on the other hand, the carriers often decline claims when, under the law, they have no right to do so. A thoro analysis of the classification in this book will enable the department to handle loss and damage issues intelligently, and to avoid many of the expensive leaks that occur under the present hit or miss plan.

“LOSS AND DAMAGE CLAIMS”

Loss and Damage Claims is the work of Mr. H. C. Lust, of the Chicago Bar. The statement in the author's preface to the work indicates its scope and purpose:

The book is prepared as a guide to the traffic man in the settlement of loss and damage claims. While care has been taken to support the various principles with citations of cases, they are intended to be illustrative rather than exhaustive.

An endeavor has been made to examine the entire law and to state only such principles as, in the opinion of the author, will be sustained in the federal courts. It has been deemed advisable to emphasize by repetition certain important principles.

An attempt has been made to create a simple classification following the course that a shipment naturally takes; thus, the liability of the carrier when it first receives the shipment, the liability during transit, the liability after arrival, seems to be the natural method of treating the subject.

In the appendix, will be found printed the three federal laws with which Congress has occupied the field of loss and damage claims, namely, the Cummins Amendment, the Twenty-Eight-Hour Law, and the Bill of Lading Act.

Attention is called to the fact that on account of new legislation which undoubtedly will be passed in the future, and new

decisions, the principles enunciated will necessarily change in the course of time. The law of loss and damage claims will be kept down to date by quarterly supplements known as the *Loss and Damage Review*. These, coming out every three months, will constitute a current quarterly textbook of the law.

“HUTCHINSON ON CARRIERS”

The work regarded by many of the foremost traffic men as the leading authority on the liability of carriers in the discharge of their duties as common carriers is *Hutchinson on Carriers*.

It is frequently cited in court decisions wherein such issues are involved.

The various incidents of transportation, such as the delivery to the carrier, the carrier's duty to transport, the carrier's liability as warehouseman, the bill of lading as a contract are treated at length in a somewhat simple style readily understood by men of average intelligence. It includes also material on water carriers. It is one of the more expensive books, but is a valuable addition to the traffic department library.

Similar works are those of *Miche on Carriers*, and *Moore on Carriers*.

“FULLER ON INTERSTATE COMMERCE”

Fuller on Interstate Commerce is a work which has to do with the Act to Regulate Commerce as it has come to the Supreme Court for review. The points involved rest largely on the jurisdiction of the Interstate Commerce Commission, the confiscation of property without due process of law, and the commerce clause of the Constitution.

In his introduction to this work, the author states that the literature of the subject, both political and economic, as well as legal, appears to be well-nigh inexhaustible, yet there seems room for a further discussion of certain features of the Act to Regulate Commerce.

The findings of the Interstate Commerce Commission to date fill some forty-odd volumes. The decisions of the lower federal courts upon this act are only less voluminous. On the other hand, the decisions of the Supreme Court, which constitute the last word on the subject, have often not been treated by writers on this subject with a due measure of importance.

STATE COMMISSION REPORTS

The concern should also make an effort to secure copies of the State Public Utility Commission reports of the state in which they are located. Many important cases come before such tribunals and a perusal of the decisions and orders entered will often be suggestive of some line of action on similar cases that may be pending.

In conclusion, lists of works on railway economics and transportation problems may be secured from book-sellers from which selections may be made for addition to the departmental library.

CHAPTER VI

TARIFF DEPARTMENT

Number of Tariffs—Individual Requirements—Request Forms—Building Up a Working File—Request Forms for Rate Quotations—Superfluous Issues—Supplements—Classification of Schedules: Division According to Roads, Division According to Associations—Interstate Commerce Commission Numbers.

NUMBER OF TARIFFS

The freight-rate schedules of transportation companies, or tariffs, as they are commonly styled, correspond with industrial catalogs, or price lists, since they set forth the kind and quality of service offered by the transportation company, and the varying costs attaching to each.

It is stated that at the present time there are in effect about 400,000 tariffs applicable on freight traffic that is being handled by our transportation companies. The application on points between which these schedules apply is, of course, confined to different sections of the country.

The number of tariffs applying from a given shipping point to various destinations thruout the country is inconsiderable as contrasted with the number of those in effect, and as a consequence the industry can quite easily maintain a tariff file which is well adapted to its particular requirements without a disproportionate expenditure.

To accommodate such a number of tariffs and to

make provisions for the storing of the superseded issues from time to time, if all of the tariffs are necessary, would require a building of considerable proportions for that purpose alone.

The Interstate Commerce Commission at Washington, D. C., is the only agency that attempts to maintain a complete file of all schedules that are or have been applicable on interstate traffic, and it does so because it is charged with that duty by the provisions of the Act to Regulate Commerce.

INDIVIDUAL REQUIREMENTS

Transportation companies readily supply tariffs to bona fide shippers. Unfortunately, however, some of the shippers in the past have used lists of tariffs filed by the common carriers with federal and state authorities, and selected at random, numbers of tariffs which did not apply to their particular use, and then requested that they be used by the carrier. For this reason, publications are not distributed now with as free a hand as heretofore.

An iron industry has no use for tariffs applying on live stock. A request to the tariff issuing officer for tariffs applying on nonallied traffic should usually be accompanied by the reason for its need.

The number of tariffs required depends upon the amount of traffic and whether the traffic be of a general or a specific nature. A firm specializing in rough iron work will not have need for as many tariff publications as a wholesale grocery jobber, since the specific tariffs on iron and steel articles will, for the most part, suffice to cover his shipments, whereas a wholesale grocer has need of both commodity and class tariffs.

A trained traffic man will have a general knowledge of the tariffs indispensable to his business and will secure them from the issuing agent or official.

REQUEST FORMS

In securing these publications, it is desirable to design a form which may be easily filled in by a typist or junior clerk. The form illustrated in Fig. 7 has proved satisfactory, as one or a half dozen tariffs may be requested at once. The postal card form reduces labor and postage.

Blank spaces are left for the name, title, railroad connection, and address of the officer or association agent on whom the request is made. In the body of the card is to be inserted the I. C. C. number of the schedule, if known, the railroad or committee number, if known, and the class of traffic that the tariff covers.

A memorandum of the tariffs requested by this method can be arranged by date of request. Under date of February 8 would be tabulated the name of all the lines on whom request was made, and under each line the number of the publications requested. As the tariffs come in, they may be checked off this memorandum, and when all are received, the memorandum may be destroyed. Sometimes it is necessary to send a second request for a tariff. If this is not successful, a personal letter is sent.

BUILDING UP A WORKING FILE

The following plan has been successfully employed in building up a working file of tariffs: The agent

Chicago, Ill., _____ 191 _____

Dear Sir:

Will you kindly furnish us copies of your publications enumerated below:

I. C. C. No.

Tariff No.

Application

placing our name on your mailing list for supplements thereto and reissues thereof, obliging

Yours Truly,

LA SALLE EXTENSION UNIVERSITY,
116 S. Michigan Avenue

FIG. 7.—A Tariff Request Form

at the shipping point or receiving station has been requested to indicate on freight bills and shipping receipts the tariff authority for the charges assessed on inbound and outbound shipments; copies of these publications are then requested of the issuing agent or railroad. This method takes but a comparatively short time, and builds up a file of tariffs which is better adapted to the requirements of a given industry than any which might be the result of haphazard or random selection.

REQUEST FORMS FOR RATE QUOTATIONS

In the best-maintained departments, some controversy will arise not infrequently as to the rate applicable on a given shipment. When it is necessary to get such information from the carrier, the postal card method used by a prominent concern is recommended. The form shown in Fig. 8 is used when shipments of its general line are to be made, and that in Fig. 9 when shipments of unusual size or nonallied traffic are involved. Fig. 8 is used almost exclusively on the outbound traffic of concerns, while Fig. 9 is used to a greater extent on inbound traffic.

If several routes are available, the card is sent to the agent or traffic representative of each of the lines, the quotations obtained are compared, and the most satisfactory figures are accepted.

This form is filled prior to the time of shipment, and accurately describes it according to packing specification and contents; the railroad agent inserts in the spaces provided for the different articles offered for shipment the corresponding rate of freight and returns it to the industry.

Please quote rates on this card.

Give through rate

To

Or nearest point

Via

PERFUMERY per 100 lbs.	VAS. IN GLASS per 100 lbs.	VAS. IN CANS per 100 lbs.	GLYCE. IN CANS per 100 lbs. BOXED.	SOAP PDR.	FANCY SOAP, N. O. S.	SOAP VALUE 5 c. lb. L. C. L. C. I.	PAPER AND MATTER
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19

COLGATE & CO.

199 Fulton Street,
New York.

Traffic Department

FIG. 8.—A Rate Request Form

On its receipt by the industry, it is filed and held until the consignee makes return. If the consignee's freight bill shows a discrepancy between the charge quoted by the representative of the initial line and the amount collected by the terminal agent at destination, the bill is then audited and the correct charge determined. This practice gives the concern a double check on the audit of such bills and greatly enhances their efficiency in this line.

SUPERFLUOUS ISSUES

If a concern receives a tariff for which it has no use, it is only fair to the carrier to request that the industry's name be removed from the carrier's mailing list for that particular schedule.

SUPPLEMENTS

Requests for tariffs should include also supplements to, or reissues of, such publications. The form previously referred to in Fig. 7 provides for this.

A tariff which is out of date, or for which the effective supplements are not available, is more unsatisfactory than no publication at all, since it leads to unnecessary effort and correspondence to procure the proper rate or regulations. If it be used without the effective supplements to quote rates or make bids on contracts, substantial losses may result which could have been avoided had some intelligence prevailed in the maintenance of the tariff file.

CLASSIFICATION OF SCHEDULES

Tariffs fall into two classes: those issued by individual railroads or transportation companies for their

own account, and those issued by an agent thus authorized by the carrier or carriers uniting in the common publication.

Before the tariffs can be filed, a classification must be made. It is necessary first to separate all tariffs into two grand divisions: the first will include the individual line publications issued by individual railroads; the second, schedules issued by agents, associations, or committees.

Division According to Roads

Taking the individual road tariffs first, these should be arranged in alphabetical order according to roads. For example:

Ann Arbor Railroad.
Atchison, Topeka & Santa Fe Railway.
Baltimore & Ohio Railroad.
Bessemer & Lake Erie Railroad.
Canadian Pacific Railway.
Chicago & Alton Railroad.
Delaware, Lackawanna & Western Railroad.
Erie Railroad—Lines East.
Erie Railroad—Lines West.

Division According to Associations

In arranging the tariffs issued by agents, associations, or committees, it is preferable to use the name of the association that the agent represents rather than the agent's name. For example:

Central Freight Association.
Gulf Foreign Freight Committee.
Illinois Freight Committee.
Transcontinental Freight Bureau.
Western Trunk Line Committee.

This is better than to use the name of the chairman of such associations, for, like the babbling brook, "agents may come, and agents may go, but the association goes on forever."

INTERSTATE COMMERCE COMMISSION NUMBERS

In conformity with an order of the Interstate Commerce Commission, each schedule applying on interstate traffic is assigned a number by which it is designated and referred to in correspondence with the Commission respecting that particular publication. This number appears in the upper right-hand corner of the title, or first, page of each schedule, and after being once assigned, cannot be used on any other schedule. The tariffs should next be arranged in the order of these Interstate Commerce Commission numbers.

On account of cancellations, the current I.C.C. numbers will not present an unbroken sequence. For example, the first number might be I.C.C. No. 19, the next effective number might be I.C.C. No. 265, and following No. 265 might be No. 312. The usual method is to proceed in the arrangement from the lowest number to the highest number.

Having segregated and arranged the tariffs in this manner, they should then be filed as a permanent record so that they may be located with the least amount of time and effort.

CHAPTER VII

TARIFF DEPARTMENT (Cont'd)

Loose-Leaf Binders: Tariff Punches; Allotment; Advantages of Loose-Leaf Binder—The Shallow Drawer Plan: Disadvantages—The Vertical Filing System—Special Tariff Devices: The Cook Tariff File; An Economical File—The Tariff Index: Plan Adopted by the Interstate Commerce Commission; Advantages of the Plan; Alphabetical Arrangement.

Various methods of filing freight-rate schedules for ready reference have been tried out.

The most satisfactory methods are: (1) loose-leaf binders, (2) shallow drawers, (3) vertical files, and (4) special tariff files.

Each of these systems has its advantages and disadvantages, and the scheme that is ultimately decided upon should be weighed by various considerations before it is adopted.

In discussing the various types of filing devices mentioned, they are to be considered merely representative of certain styles. It is not the purpose of the discussion to advocate the makes of certain manufacturers or to favor any individuals. A half dozen manufacturers may be found dealing in the loose-leaf binder, or the sliding shutter compartment device, or whatever device is decided upon. A canvass of all dealers should be made before placing the order.

LOOSE-LEAF BINDERS

The transportation companies quite generally employ the so-called "loose-leaf binder" of the Tengwall type

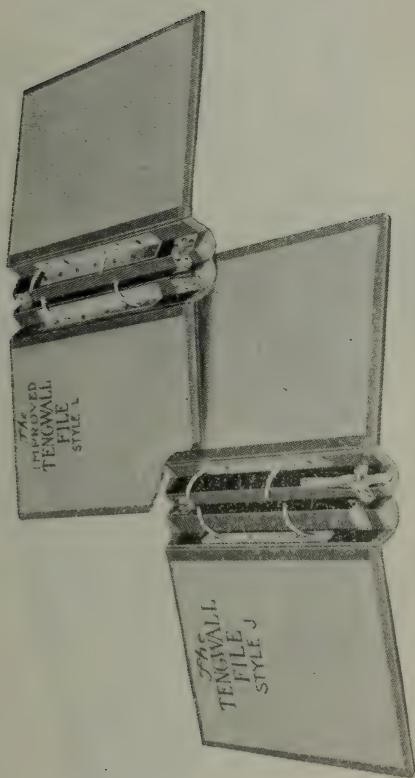


FIG. 10.—Tengwall Tariff Binders

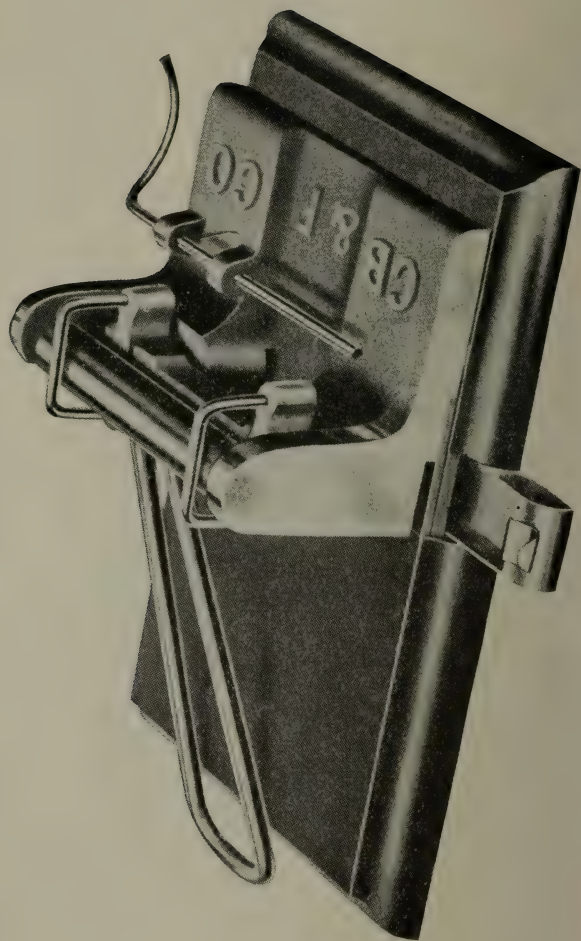


FIG. 11.—Tengwall Tariff Punch

for the accommodation of their tariffs. Similar devices are sold by various manufacturers, and the results following the use of this type have been pronounced uniformly satisfactory.

Tariffs are required by state and federal commissions to be of uniform size, and a standard size device may be used for accommodating them.

Fig. 10 indicates the Tengwall binder open for the purpose of inserting or removing tariffs. These binders are made with backs varying in width from two to five inches or more, and will accommodate a number of schedules. The larger sized volumes, however, are unwieldy and difficult to handle, and the generally accepted size is the three-inch back.

The prongs shown in the diagram fit thru holes which are punched in the margin of the schedule, and lock by means of a thumb spring or clasp when the book is closed.

These binders are filled with the tariffs as they have been arranged alphabetically and numerically, according to line or association issue.

The volumes are readily opened by releasing the thumb clasp at any given place in the volume for the purpose of inserting new schedules or supplements, and removing those that may be cancelled.

Tariff Punches

The majority of tariffs are punched with holes by the railroad printer to accommodate the prongs of this device. For those that are not punched, the manufacturers of the binder have manufactured a punch, illustrated in Fig. 11. This will make the four necessary perforations with one operation.

Arrangement of Equipment

Fig. 12 shows a rather complete and compact file in which the Tengwall binder has been used. The wall cabinets are made in units five shelves high, each unit accommodating fifty-five of the three-inch binders.

The table is waist high and is arranged with shelves which will accommodate two tiers of binders on both sides, one hundred in all. The table top makes it possible for the clerk to consult his volume right there, to develop the rate, and to replace the volume without loss of time.

As it stands, this file accommodates between twelve and fifteen thousand publications, and occupies a space nine by fifteen feet. It permits free access to the binders for a half dozen or more employees.

Allotment

There is one objection common to all systems of tariff filing—the difficulty of assigning the right number of binders—or drawers or other units—to accommodate the tariffs of a given road or association.

Perhaps ten binders would be assigned to one of the larger associations or roads, but ultimately thirteen or fourteen might be required for reissues or additional schedules. In such a case, it would then be necessary to break the continuity of the numerical arrangement assigned to a given road, unless additional empty binders had been inserted at frequent intervals. To illustrate this point: The Atchison, Topeka & Santa Fe Railway Company tariffs would originally be assigned to binders 4, 5, 6, 7, and 8. Binder 9 would hold the issues of another road. Later, it might be found that the number of binders assigned

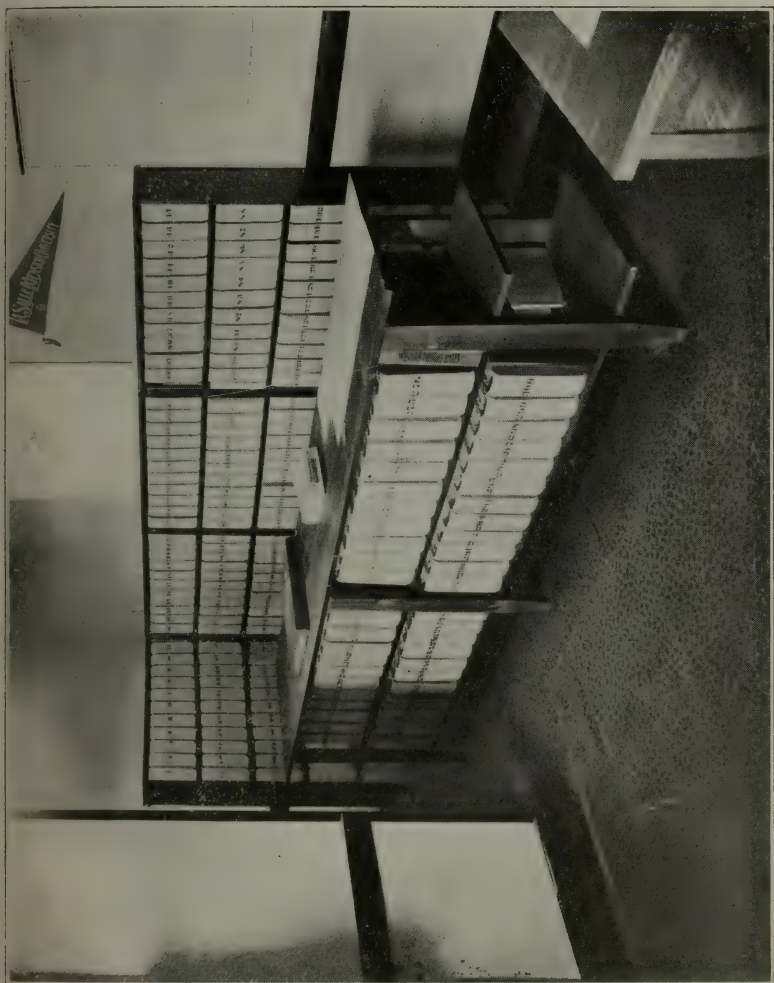


Fig. 12.—LaSalle Extension University Tariff Files

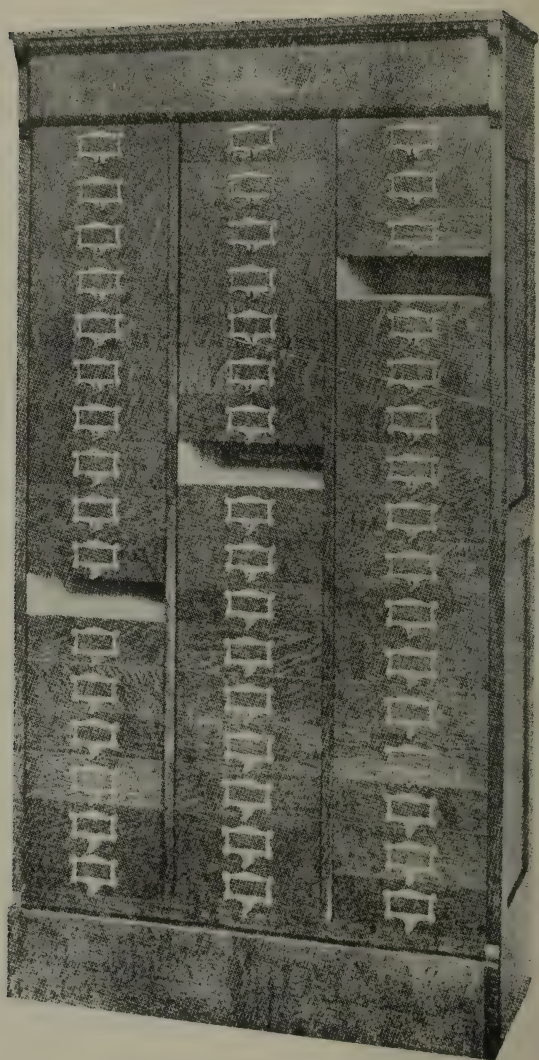


FIG. 13.—Ohmer Tariff Cabinet

were not sufficient to accommodate the Santa Fe publications and their reissues. The overflow would have to be taken care of at the end of the series, in binders 301, 302, and 303. An employee in search of Santa Fe tariffs must then look in two places instead of one.

This difficulty may be avoided by employing letter suffixes, 10-A, 10-B, 10-C, etc., to accommodate the overflow of certain road issues. Unless a generous allotment of empty binders is distributed thruout the file, periodical realignments will be necessary about once a year, until the file attains some degree of stability.

Advantages of Loose-Leaf Binder

The advantages of this system are that it keeps the tariffs free from dust and in perfect condition, prevents the loss of issues, and enables the tariff clerks to handle supplements and new publications with a minimum amount of effort.

These binders are put up in various styles of bindings, and vary in price from sixty cents each to a dollar and up. They are quite durable and are designed to withstand the rough usage to which they are subjected.

SHALLOW DRAWER PLAN

In the shallow drawer plan, drawers are substituted for binders, and the punching is rendered unnecessary.

The drawers are numbered numerically, and the drawer number is used as the key of the index instead of the binder number as in the case of the Tengwall system.

One of the most efficacious devices of this type is illustrated in Fig. 13. The front of these cabinets

is composed of sliding shutters of wood which are warp proof, and which are constructed to slide in vertical grooves. Each shutter is furnished on its face with a combination list and label holder that permits the change of labels at any time.

When access to any particular compartment is desired, it is only necessary to raise its shutter as high as it will go, whereupon it automatically latches and remains in that position, leaving the compartment open. A touch on the latch, or the raising of another shutter, will cause the shutter to slide down over the proper compartment. These compartments are practically dust-proof.

Disadvantages

There are several objections to the drawer system. As the tariffs are removed from the drawer one by one, the numerical arrangement may be destroyed. There is also the possibility of returning them to the wrong drawer, altho this can be minimized by indicating on the title-page of the tariff the number of the drawer to which that particular issue has been assigned. These numbers should be large, and can be made by rubber impression stamp, or colored crayons.

Another objection is the risk of mutilation from the constant handling of the tariffs. Essential information may be torn out or obliterated.

The installation of this device, however, adds much to the attractiveness of an office, as may be seen from the illustration appearing in Fig. 14.

VERTICAL FILING SYSTEM

This mode of filing involves the use of vertical correspondence files. Heavy cardboard divisions separate

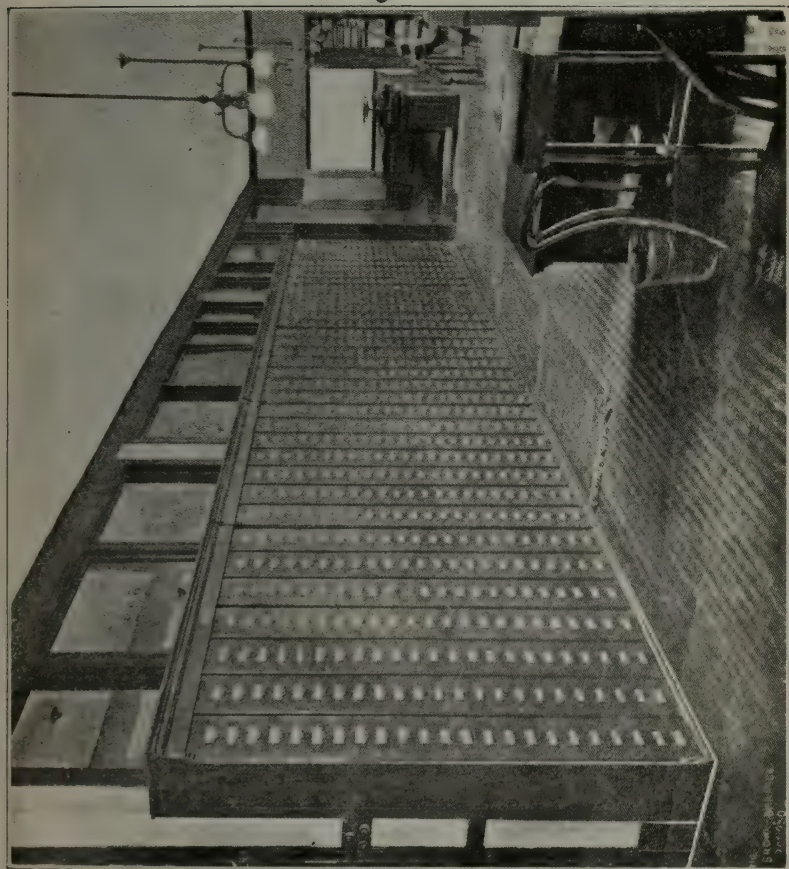
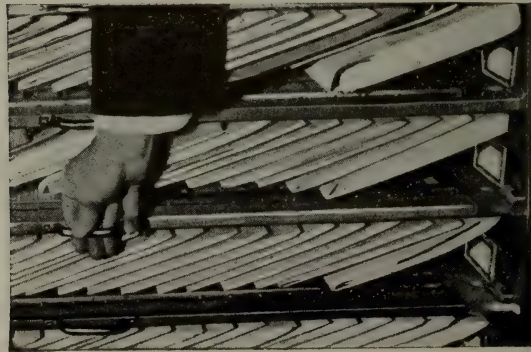
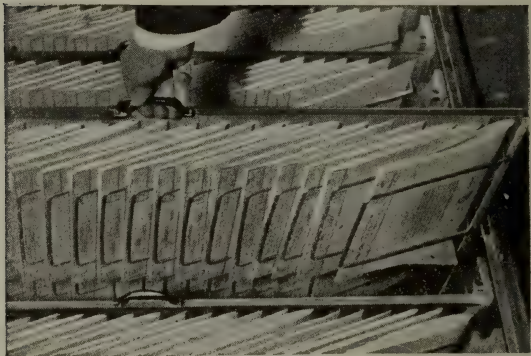


FIG. 14.—A Collection of Ohmer Units



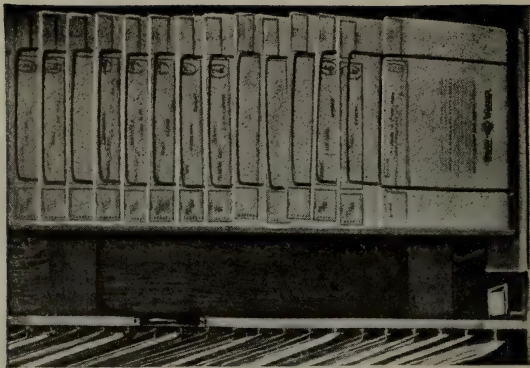
No. 1

Frame in file before being drawn out. Note bulky issue in frame at right.



No. 2

Frame drawn out from file.



No. 3

Frame, after having been drawn out as shown in Figure 2, turns on a pivot and brings all issues facing front and instantly accessible.

FIG. 15.—An Adjustable Tariff File. All Folders in Plain View

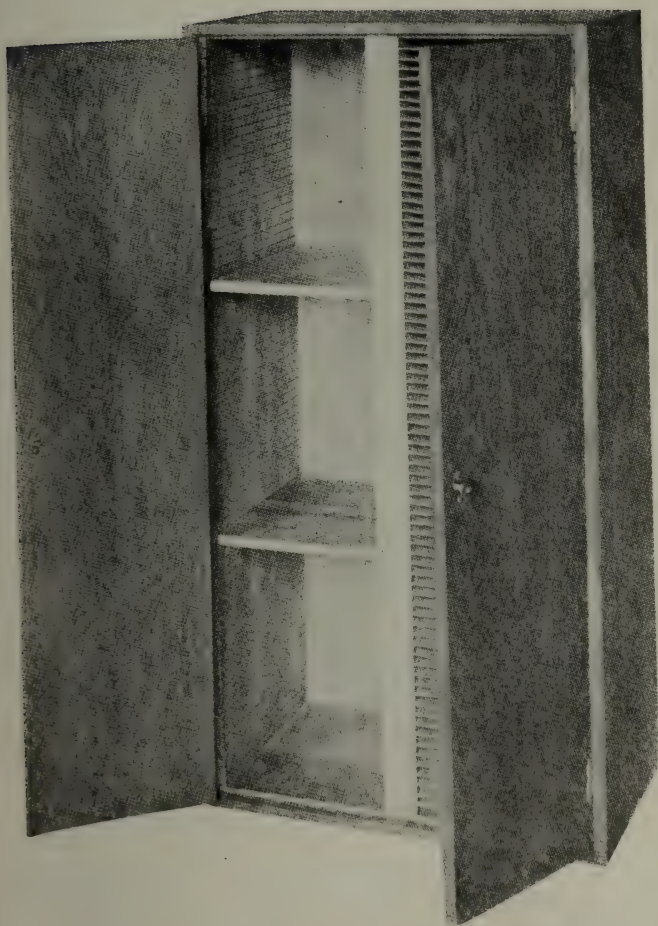


FIG. 16.—An Inexpensive Tariff Cabinet

the various roads, and manilla board of lighter weight separates the various numerical subdivisions of each line. Some of the leading concerns of the country use this plan of filing tariffs.

It requires but little more time to locate a tariff under this plan, but more effort is required in manipulating the heavy drawers. The wear and tear on publications is also considerable.

SPECIAL TARIFF DEVICES

The Cook Tariff File

Of the many special devices for the accommodation of tariffs, the one known as the "Cook Tariff File" has been especially designed for the accommodation of schedules of this kind. As indicated in Fig. 15, all tariffs are in plain view, filed alphabetically in folders of proper size. This keeps the issues clean, compact, and convenient for ready reference. The plan has quite a following among railroads and industrial organizations.

The system has two difficulties: (1) The wires holding the folders sometimes spring, or (2) they are pulled out and wear thru the holder and eventually mutilate the publication.

An Economical File

Expense must be considered, especially by small organizations. It is wiser for them to forego the luxuries of elaborate and expensive equipment. Perhaps the most economical files are those of cheap wood construction, such as illustrated in Fig. 16. Pasteboard letter boxes could be used if economy demanded it.

THE TARIFF INDEX

After securing the nucleus of a tariff file, arranging the issues in the necessary classification, and filing them according to one of the plans suggested, it is still necessary to make an index so that a desired publication may be readily located.

The Interstate Commerce Commission, after an exhaustive consideration of many plans that were submitted for the indexing of tariffs required of common carriers, formulated the following arrangement.

The tariffs of an individual road or of an association are to be segregated and classified according to their application as follows:

1. Class-rate tariffs. Those tariffs which name only class rates and are so indicated on their title-page.
2. Class and commodity tariffs. Those tariffs which, in addition to class rates, contain rates on specific or general commodities.
3. General commodity tariffs. Those tariffs which contain rates on commodities which are too numerous to mention or indicate on the title-page of the publication.
4. Specific commodity tariffs. Those tariffs which apply on one commodity or on a group of commodities that may be readily designated in a brief description, such as brick and brick products, iron and steel, iron and steel articles, and coal and coke.
5. Miscellaneous schedules. Those governing special services, such as refrigeration, milling in transit, switching, and demurrage, general rules governing the handling of traffic of various kinds, classifications, and exception sheets.

The carriers of necessity, and most of the large

industries for convenience, have followed out this plan in the general indexing of their tariff files.

This plan has the advantage of locating a given class of publication absolutely, that is to say, if a class-rate schedule is wanted, it will be in the block of class-rate tariffs and not in the miscellaneous schedules or in any other divisions of the classification.

The index is then arranged alphabetically, by road and by association, and an appropriate column is set aside for the purpose of indicating the binder number, drawer number, or drawer compartment or holder in which the tariff is to be found; the I. C. C. number and, if desired, the railroad number of publication; and the general territory from which and to which it applies.

A sample arrangement of this kind is indicated in Fig. 17.

This diagram, altho from a railroad tariff index, indicates the plan and practice in the arrangement of an index, and an additional column is all that is necessary to adapt this form to industrial requirements. The additional columns should indicate the particular binder, compartment, drawer, or other unit in which the tariff designated will be found.

A great many concerns have not adopted the loose-leaf book plan for tariff indexes, but use a card index instead. Under this plan a card is designed which will show the essential information desired, such as the character of the tariff, the general territory from and to which it applies, the I.C.C. number and various commission numbers, the railroad numbers, and the filing reference.

The advocates of the book plan claim superiority of their medium over the cards by reason of the fact that it is possible under the book plan to index twenty-five,

I. C. C. No.	I. R. C. No.	R. C. O. No.	L. E. & W. G. F. D. No.	APPLYING ON	FROM	TO
AKRON, CANTON & YOUNGSTOWN RY.						
(6) 10	11	227	Brick, Clay, Etc.....	Akron, Britain, Colona and Magadore, Ohio.	Ill., Ind., Ohio, Etc.
(6) 12	13	226	Classes.....	Ohio Pts.....	Ill., Ind., Ohio, Etc
ALABAMA GREAT SOUTHERN R. R. (See Queen & Crescent Route).						
ALABAMA & VICKSBURG RY. (See N. O. & N. E. R. R.)						
ANDERSON, FRANK.						
(6) 10	62001-A	Lumber and Forest Products.....	Memphis, Tenn. (From be- yond).	Ill., Ind., Ohio, Seaboard, Northwest, Etc.
(6) 9	62003-B	Lumber and Forest Products.....	Memphis, Tenn., Helena and W. Helena, Ark., and L. and & N. Tenn. Pts.	Ill., Ind., Ohio, Seaboard Northwest, Etc.
(6) 12	62004-A	Classes and Commodities.....	Memphis, Tenn.....	Ill., Ind., Ohio, Northwest, Etc.
(6) 11	62002-B	Classes and Commodities.....	Memphis, Tenn.....	Seaboard and Virginia Pts.
ANN ARBOR R. R. AND STEAMSHIP LINES.						
(6) A439	119-D	Acetone, Acid (Acetic), Wood Al- cohol, Etc.	Manistique, Mich.....	Ind., Mich., N. Y., Ohio, Pa.
(6) A444	118-C	Fruits and Vegetables viz:	M. & N. E. Ry.....	Ill., Ind., Ohio, Etc.
(6) A385	127	122	Potatoes.....	Ann Arbor R. R. Pts.....	Ill., Mich. and Wis. Pts.
(6) 665	17618	Furniture.....	Milwaukee, Kewaunee, Man- itowoc, Wis., and Manis- tique, Mich.	Ind., Ohio, Pa., Etc.
(6) A214	108-B	Grain and Grain Products.....	Manitowoc and Kewaunee, Wis., and Manistique, Mich.	Ind., Ohio, Etc.

(c)—Indicates the L. E. & W. R. R., F. W. C. & L. R. R. and Nor. Ohio Ry. are delivering as well as intermediate carriers.

FIG. 17.—Extract for Section 2 of an Index of Freight Tariffs

fifty, or a hundred tariffs on a single page and that an employee can much more readily find the numbers or applications given on a sheet in determining the tariffs he may desire than he can where cards are used.

It is to be borne in mind that quite frequently an employee in search of a rate does not know in which tariff it will be found and, as a consequence, is governed by the class of tariffs and the terms of its general application; the book plan does apparently contribute to his efficiency in such instance.

CHAPTER VIII

RATE DEPARTMENT

The Tariff Clerk—Division of Rates: Scope of Work—Quotation Clerk: Relation to the Sales Department; Forms for Quoting Rates; Readjustments—Carload versus Less-Than-Carload Figures — Rate Tabulations — Salesmen's Charts—Rate Clerk: Qualifications; Duties—Records—Overcharges: Fifteen Opportunities for Error in Freight Bills—Forms for Overcharge Audit.

The preceding chapters have been devoted to an exposition of tariffs, their installation and filing systems. It is appropriate here to touch upon the employees directly connected with this feature of the department.

THE TARIFF CLERK

If the file assumes considerable proportions, it will probably become necessary for the concern to employ a tariff clerk to maintain the file. That is, it will be his sole occupation to request publications desired, place the tariff and supplements as they are received, and remove those which are cancelled.

If the rate clerk, quotation men, or others in the department find that a desired publication is not in the file, the tariff clerk should be provided with a memorandum indicating the class of publication desired, so that he may arrange to secure a copy of it.

This work may be performed by a bright boy or

junior clerk, and the preliminary training which he receives in this capacity will go far toward his development as an efficient quotation clerk and, eventually, as a rate man. He may in his spare moments assist the departmental statistician or rate clerk by studying the tariffs and supplements as they are received, and noting changes applicable on the firm's line.

DIVISION OF RATES: SCOPE OF WORK

The scope of the work of this division is perhaps more comprehensive than that of any other division in the traffic department. Broadly speaking, it is concerned with the charges that are, or may be, assessed on the firm's inbound and outbound products, and this involves consequently past, present, and proposed rate adjustments.

In view of this situation, where the size of the department permits, one man should be delegated to make a study of new tariffs and supplements as they are received, and to predetermine the proposed changes in rates as applied to the firm's activities.

This man should preferably be the chief rate clerk, or, as in many instances, the assistant traffic manager. He should be a man of considerable experience in rate adjustments, intimately acquainted with the application of tariffs and the various phases of the Act to Regulate Commerce as applied to this feature of transportation.

Another man should be delegated to furnish the sales department and prospective customers with quotations of existing rates of transportation, and to figure where requested laid-down costs at destination on materials and supplies for which they may be in the market.

Still another man could be provided to audit the transportation bills as they are received, to develop such inconsistencies as may exist, and to recover such amounts as may be warranted.

For convenience, these men may be designated the rate clerk, the quotation clerk, and the overcharge investigator. Preferably the overcharge investigator and the quotation clerk should be subordinate to the rate clerk and eligible to his place in the event of his promotion or retirement.

THE QUOTATION CLERK

Not infrequently the controlling factor in effecting a sale is transportation costs from point of manufacture, or distributing center, to the purchaser's designated point of delivery. As a consequence, road salesmen frequently wire into headquarters to ascertain the transportation cost on shipments of various descriptions.

Relation to the Sales Department

Such requests, under an intelligent plan of operation, would be handled by the quotation clerk. The request by the sales department or representative should be as comprehensive and accurate as possible. That is to say, if the customer specifies that goods are to be put up in a certain kind of package, in barrels, boxes, or crates, or in units of a specified weight, these details must be incorporated in the request, since the rate of freight is often contingent on the style of package, and in many cases, estimated weights are established which apply instead of actual weights.

On the receipt of such a request, the quotation clerk consults the necessary tariffs applying on the shipment, and quite often a half dozen or more schedules may be involved in figuring the charge between various points in this country. On a movement from Chicago to Texas, for example, it is necessary to consult four publications: (1) a territorial directory, to develop the group location of the point of origin or the destination; (2) the classification, to determine the classification rating; (3) the exceptions to the classification published by the southwestern lines, to ascertain whether an exception has been established removing the application of the item from the classification; and (4) the tariff containing the rate, which must also be analyzed for exceptions, commodity rates, or other information of a similar import which might set aside, in some degree, the application of the issues previously mentioned.

Forms for Quoting Rate

After determining the rates of freight applicable, the sales representative or prospective customer is then informed of the figure.

For this purpose, a form similar to that appearing in Fig. 18 is recommended.

This form could be prepared in duplicate by the quotation clerk. The original is, of course, sent to the person making the request. The duplicate should be affixed to the request, and filed with the traffic department records. In the event of question, this affords a check on how the quotation was made, and definitely fixes the responsibility.

The form also indicates to the sales department any contemplated advance in rates. This is a happy thought,

Dear Sir:—

Your request of _____ 1918, current rate on _____

from _____ to _____

is _____ per _____

authority _____ Tarriff I. C. C.

supplements on file indicate that this rate will be advanced _____ 1918,

to _____ per _____

Yours very truly,
Traffic Manager

FIG. 18.—A Rate Quotation Form

because the sales representative can then inform the prospective customer of the probability of the increase, and this is an added incentive for an early purchase.

Readjustments

Where the order is not secured, it should be followed up with the sales department to determine whether the rate of freight was too high, and if the material was purchased in some other primary market. If so, the rates from the primary markets involved should be compared to ascertain their relative adjustments, and if they are reasonable, a readjustment in selling prices will be necessary to secure a share of the business in that portion of the country.

If, however, there should be some inconsistency in the rates, steps should be taken to secure a readjustment. The industry should not continue to lose sales thru the maintenance of higher rates from their shipping stations than are warranted.

CARLOAD VERSUS LESS-THAN-CARLOAD FIGURES

It sometimes happens that the less-than-carload rate is so much higher than the carload rate that a purchaser profits by ordering a full carload.

If the respective carload and less-than-carload rates were ten and twenty cents per 100 pounds, the carload rate carrying a minimum weight provision of 30,000 pounds, the rate of freight on 15,000 pounds of a commodity would be \$30 at the less-than-carload figure, while 30,000 pounds of the same commodity at the carload rate of ten cents would be the same amount.

These instances should be brought to the attention

of the purchaser. The continued practice of this policy is reflected in many cases in the increased volume of sales.

RATE TABULATIONS

It is the practice of some of the leading concerns of the country to incorporate in the catalogs or price lists which are distributed to their prospective purchasers, tabulations giving a somewhat elementary classification of their offerings, and corresponding rates of freight attaching to those classes from shipping point to selected destination thruout the country. Such a tabulation appears in Fig. 19.

The preparation of this transportation price list is not unduly expensive or burdensome to the department, and the increased business and favor that it would find in the firm's patronage definitely warrants its adoption. It enables buyers to figure at least an approximate charge on goods purchased from this house and laid down in their vicinity.

The advantage of this is perhaps more fully emphasized by the remarks of Consul M. S. Myers, Swatow, China, in an article appearing some time ago in *The Daily Commerce Report* in which he has this to say concerning the efforts of American manufacturers to develop foreign trade in China:

Another practice concerning which I have also heard complaint should be mentioned: the sending of all manner of descriptive literature without any reference to price. Whether or not this method of seeking business is suitable for domestic trade, American manufacturers must know that it is certainly not practicable for trade with China. If the product is used in China, the all-important factor is how much it will cost the local importer, and if the manufacturer's letter gives that

FREIGHT RATES

Tables showing the freight rates per 100 pounds on goods shipped from Chicago to a number of cities in each state, these cities being used by the railroads as basis for figuring rates for all the towns in the immediate vicinity of each city.

RAILROAD COMPANIES FIGURE FREIGHT RATES WITH THE LARGER CITIES IN EACH STATE AS A BASIS. All other towns located in the same part of the state as any one of these cities take practically the same rate or only a few cents per 100 pounds more or less than the rate in the named city.

Please consult the following Table of Rates, considering it in connection with the classification of merchandise, and you will be able to determine easily, almost instantly, what the freight will amount to on any goods. If your station is not named in these tables, the rate to your station will be very nearly the same as the rate to the nearest city named, or you may add your freight agent.

HOW TO SAVE ON FREIGHT CHARGES. In having goods shipped by freight, it pays you to make up an order of 100 pounds or more, because railroad companies usually charge as much for a shipment weighing less than 100 pounds as they do for one weighing 100 pounds or more.

When you leave the method of shipment to us we always choose the cheapest method.

CLASSIFICATION OF MERCHANDISE FOR FREIGHT SHIPMENTS

You will notice in the Freight Rate Table below there are four different rates quoted to each city. And these, second class, third class and fourth class. This is because the railroad companies base their rates on the kind of merchandise to be carried. In order, therefore, to give you an idea as to the rate which any kind of merchandise will take to your nearest city, we tell you here the kind of merchandise which takes the different classes of rates.

[illegible]

HERE ARE THE RATES PER 100 POUNDS TO DIFFERENT TOWNS IN EACH STATE

From Chicago to					From Chicago to					From Chicago to				
Chicago	St. Paul	St. Louis	St. Peter	St. Cloud	Chicago	St. Paul	St. Louis	St. Peter	St. Cloud	Chicago	St. Paul	St. Louis	St. Peter	St. Cloud
ALABAMA—														
Birmingham	\$1.32	\$1.12	\$0.53	\$0.73	MONTGOMERY—					NORTH DAKOTA—				
Drewton	1.48	1.27	1.00	.82	Frankfort	\$0.73	\$0.82	\$0.51	\$0.40	Bismarck	\$1.69	\$1.35	\$1.07	\$0.76
Mobile	1.33	1.11	1.00	.75	Meridian	.80	.65	.55	.46	Fargo	1.17	.99	.77	.54
Montgomery	1.33	1.11	1.00	.77	Bokheim	.90	.77	.60	.41	Grand Forks	1.24	1.04	.77	.54
ARIZONA—					Bozeman	.92	.77	.60	.41	Minot	1.16	.99	.79	.54
Pacifica	2.90	2.51	2.00	1.75	Lake Charles	1.58	1.32	1.07	.82	OHIO—				
Tucson	2.90	2.51	2.00	1.75	New Orleans	1.18	.96	.75	.56	Cincinnati	.81	.44	.34	.26
ARIZONA CITY	1.20	1.01	.77	.59	MARINE—					Columbus	.43	.28	.23	.18
Fort Pauline	1.30	1.11	.87	.69	MARTLAND—					Toledo	.49	.41	.33	.25
Fort Snelling	1.30	1.11	.87	.69	Baltimore	.97	.80	.67	.49	OKLAHOMA—				
Little Rock	1.20	1.01	.77	.59	MASSACHUSETTS—					Galveston City	1.50	1.29	1.07	.87
San Antonio	1.47	1.27	1.00	.84	Boston	.97	.85	.82	.46	OREGON—				
CALIFORNIA—					Beverly	.88	.56	.44	.28	Portland	.84	.65	.48	.37
Bakersfield	3.40	2.95	2.45	2.07	Beverly	.88	.56	.44	.28	PENNSYLVANIA—				
Bakersfield	3.40	2.95	2.45	2.07	Beverly	.88	.56	.44	.28	Harrisburg	.88	.77	.58	.40
San Francisco	3.40	2.95	2.45	2.07	Brainerd	.88	.56	.44	.28	Pittsburgh	.82	.69	.42	.31
COLORADO—					Gran Rapids	.88	.56	.44	.28	PHOENIX				
Denver	1.80	1.43	1.10	.85	Traverse City	.84	.64	.42	.31	Providence	.78	.68	.46	.34
Durango	2.30	2.70	2.10	1.50	MINNESOTA—					SOUTH CAROLINA—				
Fort Collins	1.80	1.43	1.10	.85	Albany	.93	.78	.62	.42	Charleston	1.30	1.10	.87	.65
Julesburg	1.08	1.41	1.07	.85	Duluth	.63	.55	.44	.25	Greenville	.40	1.24	1.00	.82
Leadville	2.40	2.25	1.93	1.49	Grand Rapids	.60	.50	.40	.25	Hot Springs	1.18	1.24	1.08	.84
Monte Vista	2.40	2.25	1.93	1.49	Minneapolis	.60	.50	.40	.25	SOUTH DAKOTA—				
Delaware	.97	.86	.65	.46	Winnipeg	.50	.43	.33	.23	Aberdeen	1.14	.86	.67	.50
DELAWARE—					Hartford	1.28	1.04	.93	.74	Bismarck	1.24	1.02	1.03	.1.10
Washington	.91	.80	.61	.43	Hartford	1.28	1.04	.93	.74	Sioua Falls	.83	.68	.47	.34
FLAT OF COLUMBIA—					Norwich	1.10	.80	.70	.50	Waterbury	.82	.64	.47	.34
Washington	.91	.80	.61	.43	MISSOURI—					TENNESSEE—				
FLORIDA—					Kansas City	.80	.65	.45	.31	Jackson	1.11	.90	.71	.54
Altoona	3.30	1.10	.97	.50	St. Louis	.46	.37	.29	.20	Memphis	.86	.80	.65	.4

FIG. 19.—A Rate Tabulation

information, i.e., current prices f.o.b. American ports, and approximate shipping and other charges to distribution centers of Hong Kong or Shanghai, the local merchant is in a position to know at once if business is possible.

On the other hand, when no information as to price is given, he has every reason to conclude that the writer is not prepared to make shipments, and it may be depended upon that unless the product is greatly in demand and unobtainable anywhere, he will not be sufficiently interested by the letter to make inquiry.

It may be remarked that very generally American firms when stating prices quote an f.o.b. Atlantic or Pacific coast port price. They should remember, however, that the prospective importer is interested only in the cost of goods delivered. Therefore, the exporter, whenever possible, should attempt to give that information as fully as he can under present conditions. Such efforts will be appreciated and will create confidence in the firm's desire for foreign business.

SALESMEN'S CHARTS

Indeed, many of the progressive industrial concerns equip their field and sales representatives with vest-pocket editions of rate tabulations on their offering which enable them to quote intelligently an approximate rate of freight from shipping point to destination.

The forms illustrated in Fig. 20 and Fig. 21 are taken from such a rate book, furnished the sales representatives of a large eastern house. Its use proved an effective lever in influencing sales.

It is prepared in loose-leaf form so that in the event of change, a corrected page may be sent to all the representatives in a given locality, acquainting them with the change and enabling them to inform

[illegible]

FIG. 20.—Vest-Pocket Rate Guide—Form A

the trade so that they may take advantage of the lower rate.

RATE CLERK

Qualifications

The significance of this title in this instance is the broad type of employee who has acquired, thru experience or other technical training, a comprehensive insight into rate-making methods, existing rate structures, classification principles, classification procedure before classification committees and rate associations, and a comprehensive knowledge of the Act to Regulate Commerce.

He should be acquainted with the rulings of the Interstate Commerce Commission bearing on transportation charges and schedules. Above all, he should have the ability to see thru a tariff and not necessarily be convinced of the finality or legality of a statement or rule so long as there is a remote possibility of discrimination in its application.

Duties

His time, for the most part, should be occupied in the study of new schedules and supplements to existing publications as they are received. The object of this study is to develop such reductions in rates as are applicable on the firm's traffic, and to defer shipments, when possible, in the event of reductions in rates, so that the firm and its patronage may avail themselves of the saving in transportation costs. Concerning advances, he should determine the propriety of such advance, and see that existing contracts or

contemplated purchases are adjusted with respect to the increased transportation charges.

He should also be a court of last resort for the quotation clerk and loss and damage investigator in the matter of intricate rate problems that may confront them from time to time.

In the preparation of graphs, tariff citations, and other essential grounds of proof in rate cases, he is a potent factor in the efficiency of the department, especially in those instances where discriminatory practices or charges of the carrier are brought to public utility commissions for review.

Another valuable service that may be rendered by this employee is the preparation of a map or chart indicating in outline the several states of the Union, the location of competing houses, and the corresponding rates of freight to selected destinations thruout the country. Especially in lines where the margin of profit is small, either a readjustment of rates or a reduction in the selling price must offset any competitor's advantage.

RECORDS

The following record will prove advantageous to the quotation clerk, the loss and damage investigator, and the rate clerk. In a card index, the states are arranged alphabetically, and under each state are given the towns to which rates have been quoted, preferably those which occasioned considerable difficulty and loss of time in the construction of the rates. The opportunity for needless repetition will be considerably minimized if the factors are entered on a card and filed in the index for subsequent reference.

For example, a request for a rate to some point on the Island of Carmen in the Gulf of California would be indexed under Mexico in the alphabetical list of states and contiguous countries. In its proper alphabetical space under Mexico, and on a card set aside for the Island of Carmen, the necessary factors entering into the construction of the rates to that point would be set forth. In the first instance, it may have required a considerable amount of research in communication with transportation companies to develop the fact that the rate was made by using the overland rates to Guaymas, plus a local schooner tariff beyond, but repeated requests for rates to the same destination could be readily handled.

OVERCHARGES

The auditing of freight bills and the handling of overcharge claims, while ultimately falling in the claim division of the department, are primarily rate matters, since the determination of whether there is an overcharge or not is contingent on the rate existing at the time the shipment was made.

The rather superficial audit of transportation charges which is performed by traffic department employees of both carriers and shippers is a source of wonder to a progressive traffic man, and can be explained only by the assumption that those concerned with the work are not alive to its importance.

Whether the transaction be analyzed from a tissue copy of the original waybill, as is the case in railway circles, or from the paid freight bill, as in industrial traffic work, certain steps are necessary, and follow in regular order.

Where possible, the freight bill should be supplemented by the original bill of lading or a copy of it, as the bill of lading often contains essential data which is not incorporated in the billing of the carriers, or on the freight bill rendered the consignee, or shipper, for payment of charges.

The bill of lading file of the traffic department should contain a copy of all bills of lading which have been executed for outbound shipments and the original bill of lading covering all inbound shipments, and the expense bills should be passed to the clerk in charge in order that this document may be attached to the respective bills.

It has been stated that there are fifteen opportunities on the average freight bill for errors to be made which will effect the amount of charges paid.

1. Frequently shipments are rebilled at one or more junction points en route, and a great deal of difficulty is experienced by industrial concerns in identifying the shipment as to the point whence it was made. Often the absence of this information on the billing makes it necessary for the railroad revision clerk to set the charges up to the rate applying from the rebilling point, when properly only a proportion of the thru rate should be assessed therefrom.
2. Not infrequently there are two or more towns of the same name in the same state, and therefore the county in which the shipping point is located becomes an essential factor, since one of the towns may take the New York rate, for example, and the other may take a Boston rate,

and the rates from or to these groups may vary as applied to points of origin or destination.

3. The date of the shipment shown in connection with the original waybill number is then to be considered. But it should be borne in mind that if the shipment is delivered a day or so prior to the issuance of the bill of lading, or if the shipment is held several days before the waybill is made, as is frequently done, the date of delivery, and not the date of this waybill, controls as to the rate to apply. For example, if a shipment was delivered on February 28, and the billing was not issued until March 3, and if on March 2, an advanced rate became effective, the shipper is entitled to the rate that was in effect on February 28.
4. The original car number in which the property was loaded at shipping point is a prime consideration, since, on many commodities, the minimum weight on which the charges may be based is contingent on the size of the car ordered. If a car of the size ordered cannot be furnished by the carrier and a smaller or larger one is furnished for the carrier's convenience, the bill of lading and charges should be computed on the basis of the size of car ordered, provided the shipment could have been so loaded.

Frequently the original car loaded may develop a defect which necessitates the transfer of its contents to some other car en route. In a great many cases where larger equipment is so used, the minimum weight will be increased by uninformed agents to that of the size car in which

the shipment reaches destination, whereas the industry may be entitled to the lower charges attaching to the car in which the shipment was originally made.

5. The destination and the desired delivery at the destination should be next considered, as not infrequently, especially in large centers like Chicago, Boston, and New York, the expense incurred in effecting a desired terminal delivery comes out of the rate, and is not added to the charge for transportation. For example, the shipment is routed New York Central Railroad to Chicago, Chicago & North Western delivery, the switching tariffs provide conditions whereby a free delivery to the designated location will be accomplished, and the line effecting it looks to the New York Central Railroad for compensation instead of to the shipper.
6. The number of packages should be tallied or checked against the invoice or other authentic shipping documents, since, in a great many cases, the weight on which charges are based is contingent on an estimated weight per package, or the rate may be quoted per crate, per barrel, or per box.
7. The style of package used—barrel, box, crate, firkin, tub, kit, or hogshead—should be verified, as in many cases different ratings are established for different kinds of packages, and the promiscuous use of abbreviations by railroad bill clerks makes it decidedly difficult to distinguish one from the other when the writing is somewhat illegible.

8. The description of the article itself should be construed in the light of the classification or tariff, and the proper description should be employed in order to secure the application of the rates lawfully applicable on goods transported. Sulphate of soda takes a different rate from sulphide of soda and in certain cases sulphite, in turn, takes still a different rate. Consequently, the description of a shipment as "10 Packages of Soda" is insufficient, and may lead to the application of an erroneous rate of freight.
9. Where estimated rates are not used, the carriers rely on track scale weights, which, in many cases, are unsatisfactory, since the cars may be weighed in motion, coupled at both ends, or they may have accumulated a considerable quantity of foreign material that is not included in the weight of the car.

Many industries are in a position to know what a given quantity of their materials or stuffs weigh, and when the scale weights indicated by the carrier are so far out of line, these average weights are frequently resorted to in readjusting the charges. A dealer in lumber of various dimensions is quite emphatic in his refusal to pay transportation charges on quantities of lumber of given kinds when the weights on which charges are based exceed certain average weights or estimated weights which he has determined by years of experience.

10. An error in rates may result from the use of the wrong tariffs, from the failure to employ the

lowest combination, or from the division of the rate, between carriers, on percentages up to and from junction points to one line taking a greater proportion than that to which it is entitled. If the rate is assumed to be fifty cents per 100 pounds, and to divide on junction A, 50 per cent to line B, and 50 per cent to line C, the charges should be rendered on the basis of twenty-five cents accruing to each line. One line, however, might take thirty cents as its proportion, which is five cents more than it is entitled to, and the other line take its usual proportion of twenty-five cents, which would result in an overcharge of five cents per hundredweight.

The rate applied to shipments should be reviewed in this light when a division of revenue is indicated on the freight bill between carriers enjoying the haul.

11. Errors in the freight column are commonly called "errors in extension," and result from an incorrect multiplication process. Three thousand pounds at ten cents per hundredweight may, in some cases, be extended as \$30, whereas \$3 is the correct charge. Inconsistent as it may seem, shippers frequently pay such absurd computations without question.
12. Errors in the advanced charges may also result from an error in extension, the same as in the freight column, or they may be due to the fact that the connecting carrier up to the junction point has taken more than it was entitled to according to the percentage divisions of the route of which it forms a part.

13. Total charges to be collected are frequently in error, due to mistakes in addition in combining the advance charges with the freight charges and charges for any supplemental services as may have been rendered.
14. Drayage charges are occasionally added to bills where this service has been performed and is provided for in tariffs. Unless, however, there is a tariff provision for this service, charges cannot be properly collected.
15. The route designated by the shipper should be followed by the carrier. If no route is specified, it then becomes the duty of the carrier's agent to forward it via the cheapest route known to him. Failing to do so, the carrier becomes liable to the shipper for any additional expense.

This sketches the fifteen opportunities for error on an expense bill of this kind. Where shipments which move on transit privileges or are switched or reconsigned at terminals, added opportunities for error arise.

The complex nature of this audit clearly indicates that it is beyond the grasp of the ordinary shipping clerk or junior clerks in railroad offices, and necessitates the services of especially trained men to produce the best results.

FORMS FOR OVERCHARGE AUDIT

In the prosecution of this work many firms employ a form somewhat similar to the one shown in Fig. 22, which is prepared by the departmental accountant, and passed on to the overcharge claim investigator to be completed.

Date of shipment.....	
Loading point.....	
Originating line.....	
Route	
Number of packages.....	
Kind of packages.....	
Commodity	
Car number and initial.....	
Billed weight.....	
Actual weight.....	
Minimum weight.....	
Rate	
If thru	
If combination	
To Junction.....	
Beyond Junction.....	
Tariff authority.....	
Special service.....	
Charges	
Actual	
Paid	
Amount due.....	
Authority for claim.....	
Carrier	

FIG. 22.—An Overcharge Audit Form

The advantage of this form is that it requires the employee charged with the investigation of moneys paid, actually to compute all charges, and does not give him the railroad figures to shoot at.

It has been found in some circles that claim investigators are wont to let some of the freight bills pass with little or no investigation. With the adoption of

this form, however, it is necessary for them to go thru the necessary steps to determine the rates applicable on the shipment. When the form is complete, it is returned to the departmental accountant, who compares it with the freight bill rendered, and, if any discrepancy exists, notes the amount due the firm, and passes the paid freight bill and the form to the overcharge claim investigator for presentation and collection of claim.

Some concerns have printed forms similar to that shown in Fig. 23, on which the weight, rate, and freight are indicated as they appear and as they should appear. Such forms may be affixed to the freight bill and returned to the carrier for correction. This enables the agent to locate the error readily and to make the necessary adjustment in his account and to render a new bill on the proper basis. Other concerns simply resort to pencil memorandums or red-ink corrections.

This sums up the more important work of the employees in the rate division. Subsequent chapters will show other fields for the employment of the men in this division.

In this chapter, the major operations of the rate divisions have been treated from the multiman point of view. In a one-man department, the work should be planned to afford the single worker, to some degree at least, the intelligent supervision that is afforded the industrial traffic man under the departmental system. Many of the forms mentioned in this chapter and the lines of suggested procedure prove adaptable equally to the one-man and multiman types of departments.

CHAPTER IX

CLAIM DEPARTMENT

Time Limitations—Tracing Shipments: The Tracer; The Carrier's Procedure; Proper Marking; Promiscuous Tracing; Filing the Tracers; Index System; Carload Tracing—Claims: Prevention; Adequate Containers; Classification of Claims; Federal Regulations; Fraudulent Claims; Dishonest Practices; Fair Play—The Overcharge Investigator: Qualifications; Waste in Unnecessary Correspondence—The Loss and Damage Investigator: Qualifications—Claim Forms—Numerical Assignment—Three Classes of Claims—Resurrection of Declined Issues—Interest an Element of Damage—Filing Devices—Claim Accounting: Book Records; Plan of Index—Vocational Training.

TIME LIMITATIONS

In the matter of loss and damage claims, close supervision of the correspondence concerning undelivered shipments is particularly necessary to avoid the possibility of a legitimate claim being outlawed under the time limitations incorporated in the uniform bill of lading and similar contracts of affreightment.

The clause in the uniform bill of lading reads as follows:

Except where the loss, damage, or injury complained of is due to delay of damage while being loaded or unloaded, or damaged in transit by carelessness or negligence, as conditions precedent to recovery, claims must be made in writing to the originating or delivering carrier within six months

after delivery of property (or in case of export traffic, within nine months after delivery at port of export), or in the case of failure to make delivery, then within six months (or nine months in the case of export traffic), after a reasonable time for delivery has elapsed; and suits for loss, damage, or delay, shall be instituted only within two years and one day after delivery of the property, or in case of failure to make delivery, then within two years and one day after a reasonable time for delivery has elapsed.

This limitation is defended on the grounds that it affords the carriers an opportunity to review the transaction while the matter is fresh in the minds of the parties concerned with the handling of the shipment. It has been sustained by the various courts, and where the conditions are not observed, many a valid and otherwise sound claim is outlawed, and the shippers can receive no redress.

TRACING SHIPMENTS

It is well to maintain the tracing division of an industrial traffic organization as a subsidiary of the claim division. Many of the shipments that the industry is called upon to trace are unlocated, and finally become questions of loss or damage. The accumulated correspondence following the tracing of the shipment can be transferred to the claim record and formal claim made when the proper time arrives.

The Tracer

The word "tracer" is the name which is applied to communications addressed to the carriers, signifying the nondelivery to the consignee of a shipment

which has been previously intrusted to the carriers' custody, and requesting that they take up the matter with their connections at the intermediate transfer point or with the junction agent in an endeavor to locate the shipment or the missing part thereof, and hurry it on to its destination.

A representative form of tracer is illustrated in Fig. 24.

The Carrier's Procedure

On receipt of the tracer, the railroad agent delegates an employee to refer to the outbound railroad billing, or waybill, as the document is styled, covering shipment for that particular day and to locate the particular waybill on which the shipment in question has been entered. He then fills out a form addressed to the agent on whom the billing was made with a request that he show delivery to the consignee. Copies are sometimes sent to intermediate junction agents.

Not infrequently, the agent at destination is unable to show delivery because the property was loaded in the wrong car. Consequently, the matter must be referred to the freight claim agent to discover whether or not the particular shipment is reported as "over," or "on hand," at any other point on the line, or in any other cars from the line that were sent to connections.

Promiscuous Tracing

The increased demand of shippers for tracers has become a serious burden to the railroads. It is practically impossible, even with an increased force of clerks, to supply all the information asked for in connection with shipments in transit.

Dear Sir:

Our customer, Mr. _____ at _____
reports the nonreceipt of shipment consisting of _____
_____ which was delivered to your _____ station and for which we hold
your receipt showing stamped date _____ 18.

Please endeavor to locate this shipment and hurry it forward to
destination, informing us as to the progress of your investigation.

Yours very truly,

John Jones
(Signed)

FIG. 24.—A Card Tracer

The majority of tracers are instituted by the shippers themselves, who believe they can hasten the movement of freight by some means of this kind. For this reason, the railroads are forced to disregard the great majority of such requests from a standpoint of economy, thus defeating the aim and purpose of many legitimate tracers.

A tracer should not be instituted until there is evidence of undue delay in transit. Then a tracer should be sent to the local agent, stating full particulars of the shipment, and requesting a prompt investigation and reply. But this should not be done until the carrier has had ample opportunity to effect the transportation.

An instance of unreasonable demand for tracers was the custom of a large Chicago enterprise to follow up its deliveries of one day with request to the carrier the next day to trace such shipments, and to indicate delivery to the consignee. As there were one hundred shipments or so daily, it can be readily appreciated that an undue burden was thus imposed on the carriers.

Proper Marking

The opportunity for property to be held in such a manner will be minimized if the shipping room is required to indicate the address of the consignee on each separate item comprising the shipment, as in such cases, it is the custom of the carriers to forward shipments received erroneously to the proper destination on so-called "free astray billing."

The first consideration of the shipping room should be to have everything exactly right, not only as to inside and exterior packing, but as to marking as well. It is

of no avail to put thru the factory an order to construct a particular article or to manufacture an article within a given time, only to have it shipped wrong, thereby losing the customer's goodwill and necessitating re-con-signing, duplicating, or returning the shipment.

Filing the Tracers

Preferably, the tracer should be maintained as a desk file, and should be kept separate from the general correspondence files of the department. A very satisfactory system of filing is to take the first letter of the word "tracer (T) as the key or letter prefix for the tracer number; all tracers starting on the first working day of each month will have number 1, and the series continues numerically thruout the month until the first working day of the succeeding month, when a new series is started. The number corresponding with the month is used as a suffix. For example, the first tracer started in the month of December would be identified as T-1-12; the first tracer in the month of January would be designated as T-1-1; the first tracer in the month of July would be T-1-7; if it is assumed that there are 600 tracers inaugurated during the month of July, the last tracer number would appear as T-600-7, and any subsequent correspondence referring to this number would be readily identified.

By employing this method, the tracers that are held in abeyance—the ones on which the carriers have not been able to indicate delivery—can be kept in a wire basket or similar receptacle. The various months are separated by stout pieces of cardboard, and the tracers are followed up from time to time.

As the period of time in which claims can be filed

diminishes, the oldest tracers can be removed from the tracing file and passed to the loss and damage clerk for preparation of the claim, with the necessary documents and the letter of transmittal. By following this plan, the outlawed claim becomes a conspicuous exception.

The method of recording and indexing tracers which is used by the National Cash Register Company has proved satisfactory. Under its system tracers are numbered from 1 to 9,999, and when the latter number is reached, a new series starting with 1 is begun. A Hall & McChesney (Syracuse, N. Y.) index file book is used in which to record the substance of the tracer; the tracer is indexed under the customer's or consignee's name, followed by the number assigned to that particular tracer.

Not only does the tracer system apply on nondeliveries but on shipments which may be unclaimed, refused, or undelivered at destination for other causes. These requests for disposition are handled in the same manner as tracers, and the efforts of the department are directed to furnishing to the carrier satisfactory orders for disposition.

Index System

In preparing the index for the tracing file, a geographical arrangement has been found the most satisfactory. Under the adoption of this plan, the destination of a shipment is taken as the key to find the particular tracer number which has been assigned to a shipment.

The tracer for a shipment consigned to Oliver Holmes, Little Rock, Ark., would be indexed under the page set aside for the state of Arkansas under "L" as follows:

Little Rock, Ark., Oliver Holmes, 1-12, indicating that tracer No. 1 of December covers.

Any substantial alphabetically tabbed book will suffice for this purpose.

Carload Tracing

With respect to carload business, not infrequently the industrial department can make arrangements with the traffic department of the carrier, whereby the latter will furnish the industrial traffic department with so-called "passing reports" showing the dates on which cars passed certain junctions or were delivered to connections at terminal points.

CLAIMS

This is another very important division of the work contemplated in industrial traffic management, since, to a large extent, the efficiency of the department is measured, from a financial standpoint, by the amount of money recovered from each carrier following the institution of claims of various kinds.

Prevention

A few years ago, loss and damage claims were taken much as a matter of course. Both shippers and carriers seemed to consider them as a necessary evil in the transportation of freight.

Lately, however, it has been demonstrated that much can be done to reduce this evil to a minimum. The carriers have, in many cases, established bureaus for the systematic study of the causes of claims, and have

taken many steps to reduce the causes of claims by requiring greater care in the handling of goods in freight houses, and better judgment in the storing of freight in cars, and by promulgating intelligent classification and tariff requirements regarding containers of various kinds.

Adequate Containers

American shippers, as a class, are not sufficiently careful of the condition of shipping containers and the consequent protection to their offering. The physical damage to a shipment is often very small as compared with the results growing out of the failure to deliver a shipment, or the delivery of it in bad condition. The man who can deliver a shipment in the shortest time and in the best condition may expect repeat orders.

The wise industrial traffic manager is not the one who tries to pack his shipments just well enough to meet the requirements of the carriers; he is the one who studies his shipments to see what is necessary beyond complying with the carriers' rules and regulations.

A few cents additional spent in using a new package or one that is a little more secure, instead of an old, flimsy container, may easily mean thousands of dollars' saving in the end.

Classification of Claims

The two broad distinctions of classes of claims are (1) overcharge claims and (2) loss or damage claims.

Overcharge claims include those claims where the

shipper or his customer has been required to pay a greater sum than that lawfully established for the service of the particular kind rendered. The determination of such instances is contingent upon the ability and resources of the departmental employees.

Loss and damage issues are not so easy of adjustment, in that many of the claims follow so-called "concealed loss" and it is difficult to determine whether this damage occurred before or after it came into or left the carrier's possession.

Questions of loss or damage claims, therefore, resolve themselves largely into questions of fact, and, as one authority has stated, such claims are largely one point law and ninety-nine points fact.

Federal Regulations

The regulations of the federal government concerning all claims require the carrier to make a thoro investigation within a reasonable time. This has done much to allay the feeling of the shipping public that unnecessary delays have attended investigations of this kind in the past.

Not infrequently a year or two years was consumed in investigating a claim, and unless the amount was sufficient to warrant suit, shippers or claimants gave up hopes of securing small amounts, and permitted the claim to fall thru by default.

Fraudulent Claims

Fraudulent claims are often submitted to the carriers, and their investigations must of necessity be sufficiently thoro to protect themselves from the practices of unscrupulous persons.

Illustrating the difficulty of placing the responsibility for the damage of goods, the following instance is cited. An industry was engaged in loading a car on a team track for a distant destination. As the plant was not situated far from the loading point, only one horse-drawn truck was employed for the purpose of carting the goods from the warehouse to the car.

The loading was satisfactorily accomplished until, while conveying the last load to the car, the horses became frightened and ran away, overturning the vehicle and scattering its contents over the landscape.

As the truck had suffered no material damage, and as the teamster feared a reprimand, he gathered up the scattered cases and continued his journey to the car, completed its loading, and furnished the carrier with the necessary shipping instructions.

When the car arrived at its destination, the consignee's check showed a considerable breakage for which the railroad's record of handling the car showed no apparent reason. Nevertheless, the claim was entered against the railroad. It happened, by chance, that a loss and damage investigator of the railroad was in the vicinity at the time, made a note of the occurrence, and had it indorsed on the carrier's shipping records. This was all that prevented the paying of a claim for which the carrier was in no way responsible.

Dishonest Practices

Another source of loss to the carrier is the dishonest truckmen who, after leaving industrial or railroad premises, cunningly open boxes and other packages, and pilfer them of their contents; as a result, when the receiving clerk unpacks the case, the shortage is

noticed, the railroad company's attention is called to it, claim is filed, and payment is secured.

Some concerns have adopted the plan of checking their shortages in the receipt and delivery of goods against the persons in the industry who have handled it. This plan has discouraged wholesale pilfering. That is to say, it is rather difficult for Henry Smith, a packer, or John Jones, a truckman, to say why all shortages or an unusual preponderance of them, both as to shipments and receipts, should occur in parcels they handled. It raises the presumption, at least, that while it may be possible, it is hardly probable.

Fair Play

These incidents are injected in this discussion more with an idea of showing the necessity for an open mind and a spirit of fair play in questions of concealed loss. A great many men on the industrial side of the fence feel that the railroads, on this score, are more sinned against than sinning.

THE OVERCHARGE INVESTIGATOR

Qualifications

A good overcharge claim investigator must be a man of ability, acquainted with the various rate-making methods employed thruout the country, the application of railroad and committee tariffs and classification rules, and the rules governing certain special services that may be rendered. He must be able to recognize discriminations in transportation charges, and to handle claims so intelligently that they may be collected with the least amount of correspondence and delay.

Waste in Unnecessary Correspondence

To many men, a letter is a letter, and little or no consideration is given to the cost or effort of its production. One of the leading industries of the city of Chicago made an exhaustive survey in this field, and developed the remarkable fact that the cost for each letter written by the organization represented an expenditure in excess of thirty cents. This cost was determined by reckoning the time used to develop the necessary facts, the time consumed in dictating, the typist's time in transcribing, material cost, wear and tear on the machine, and the cost of paper and postage.

It is evident, then, that it pays to make letters of transmittal and claim papers so complete that there will be no unnecessary amount of correspondence.

THE LOSS AND DAMAGE INVESTIGATOR

Qualifications

The qualifications of the loss and damage investigator must be entirely different from those of the overcharge investigator.

He must depend, for the most part, upon an intimate knowledge of the law of contract, the law of agency, bailment, and the many other common-law regulations that govern the delivery of property to common carriers, and their liability, both as carriers and as warehousemen, to transport and to deliver. He must also have a knowledge of current court decisions which may in any way affect pending issues or issues which, on some technicality, may have been previously declined by the carrier.

CLAIM FORMS

The various kinds of claims, the necessary documents to substantiate the claim, and such other information necessary to its intelligent investigation is incorporated in an able treatise entitled *Freight Claims*, written by Mr. Trimpe, of the Chicago Bar, and published by LaSalle Extension University, Chicago.

Mr. G. H. Hunt, Freight Claim Agent of the Chicago Great Western Railroad, is the author of a monograph, *The Investigation of Freight Claims*, also published by the institution mentioned in the foregoing paragraph, a textbook which shows the various steps in the investigation of freight claims from the standpoint of a railroad freight claim department.

Standard forms have been devised for the presentation of both classes of claims, that is, a form for overcharge claims, and a form for loss or damage claims.

These forms appear in Fig. 25 and Fig. 26. The essential information required by each is self-evident.

These forms were approved by the Interstate Commerce Commission, the National Association of Railroad Commissioners, and the National Industrial Traffic League. The use of them simplifies the procedure in drawing up the claim, and presents a uniform statement of facts for consideration which greatly facilitates the investigation of the claim.

Some concerns that do not employ the standard form use a mimeographed or multigraphed form similar in arrangement to that appearing in the standard form.

On all claims filed with the carriers, follow-up letters should be sent when an acknowledgment is not received. The carrier should acknowledge that the

Standard Form for Presentation of Overcharge Claims

Approved by the Interstate Commerce Commission, the National Industrial Traffic League,
the Freight Claim Association

(Name of person to whom claim is presented)

(Address of claimant)

(Claimant's Number)

(Name of carrier)

(Date)

(Carrier's Number)

(Address)

This claim for \$ (Amount of claim) is made against the carrier named above by (Name of claimant)
for Overcharge in connection with the following described shipments:

Description of shipment

Name and address of consignor (shipper)

Shipped from

(City, town or station)

To

Final Destination

(City, town or station)

Routed via

Bill of Lading issued by

(City, town or station)

Co.; Date of Bill of Lading

Paid Freight Bill (Pro) Number

; Original Car Number and Initial

Name and address of consignee (Whom shipped to)

If shipment reconsigned enroute, state particulars:

Nature of Overcharge

(Weight, rate or classification, etc.)

DETAILED STATEMENT OF CLAIM

NOTE.—If claim covers more than one item being shipped under same classification, attach separate statement showing how overcharge is determined and insert totals in space below.

	NO. OF PKGS.	ARTICLES	WEIGHT	RATE	CHARGES	AMOUNT OF OVERCHARGE
Charges Paid:						
		Total				
Should have been:		Total				

Authority for rate or classification claimed

Give, so far as practicable, Tariff reference (I. C. C. number, effective date and page or item).

IN ADDITION TO THE INFORMATION GIVEN ABOVE, THE FOLLOWING DOCUMENTS ARE SUBMITTED IN SUPPORT OF THIS CLAIM.

- { } 1. Original paid freight ("expense") bill.
- { } 2. Original invoice, or certified copy, when claim is based on weight or valuation, or when shipment has been improperly described.
- () 3. Original bill of lading, if not previously surrendered to carrier, when shipment was prepaid, or when claim is based on misrouting or valuation.
- () 4. Weight certificate or certified statement, when claim is based on weight.
- () 5. Other particulars obtainable in proof of Overcharge claimed.

Remarks

The foregoing statement of facts is hereby certified to as correct.

(Signature of claimant)

{Claimant should assign to each claim a number, inserting same in the space provided at the upper right hand corner of this form. Reference should be made thereto in all correspondence pertaining to this claim.} of the documents mentioned as have been attached, and explain under "Remarks" the absence of any of them.
*Claimant will please place checks in the space provided for each document submitted in support of the claim. When for any reason it is impossible for claimant to produce original bill of lading, if required, or paid freight receipt, claimant should indemnify carrier or carriers against duplicate claim supported by original documents.
{Claimant for overcharge on shipments of lumber should also be supported by a statement of the number of feet, dimensions, kind of lumber, and length of size on shipment.
Claims based on rates quoted in letters from traffic officials should be supported by the original or copies of such letters.

The Traffic Service Bureau, Chicago, Printers.

TO CLAIMANTS!

Persons presenting claims to a carrier will expedite settlement by furnishing the carrier with a complete and detailed statement of all pertinent facts tending to establish the validity of their claims. It is the desire of carriers to settle promptly all valid claims, and the frank and hearty co-operation of the claimant is therefore solicited. Delayed settlement of claims is frequently due to the failure of the claimant to furnish carrier with the necessary information and documents with which to make investigation and establish liability promptly. It should be borne in mind that carriers under the terms of the Act to Regulate Commerce are required to thoroughly investigate each claim before payment. Claimants should, therefore, in every case furnish the carrier, as far as possible, with the information and documents called for on the other side of this form, even if they are not immediately available. There are no claims without loss and damage, in connection with which it may be necessary to call for additional information from the claimant before settling the claim.

Claimants are requested to make use of this form for filing settlements. In carriers. Claims may be filed with the carrier's agent either at the point of origin or destination of shipment and documents called for by the Claimant, and will be considered properly presented only when the information and documents called for on the other side of this form have, as far as possible, been supplied. A duplicate copy thereof should be preserved by the claimant.

Claimants should read carefully the information appearing below.

IMPORTANT INFORMATION TO CLAIMANTS RESPECTING OVERCHARGE CLAIMS.

Before presenting a claim on account of overcharges, the following important information respecting claims should be given careful consideration:

1. The terms under which property is accepted and transported by a carrier are stated on the bill of lading issued by the carrier; also in tariffs and classifications issued or subscribed to by the carrier. Persons intending to file claims should, before doing so, examine the terms and conditions under which property was accepted and transported. If any part of the shipment in question was subject to the Regulations for the Transportation of Explosives and Other Dangerous Articles, prescribed by the Interstate Commerce Commission, pursuant to Acts of Congress, the person filing the claim should know that all of these regulations applicable to the shipment must be complied with.

2. Carriers and their agents are bound by the provisions of law, and any deviation therefrom by the payment of claims before the facts and measure of legal liability are established will render them, as well as the claimant, liable to the fines and penalties by "It is not the proper practice for carriers or companies to adjust claims immediately upon presentation and without investigation. The fact that shippers may, in some cases, be induced to make a payment in cases, upon subsequent examination, the claims prove to have been improperly adjusted, does not justify the practice.

3. Pending the settlement of any dispute or disagreement between the consignee and the carrier as to questions of overcharge in connection with property transported, the consignee is not to be held liable for any damages or storage charges as well as loss or damage, by promptly accepting the property from the carrier. Such action on his part in no way affects any valid claim which may exist against the carrier.

4. Under the provisions of the 6th section of the Act to Regulate Commerce, it is unlawful for a carrier to charge or demand or collect or receive, any greater or less or different compensation for the transportation of property, than the rates and charges named in tariffs lawfully on file, nor to refund or remit in any manner or by any device any portion of the rates and charges named in tariffs lawfully on file, nor to refund or remit in any manner or by any device any portion of the rates and charges so specified based on the ground that the charges has complied its charges on excessive weight or wrong classification is as much a violation of the law as is a direct concession or departure from the published rates and charges.

In this connection, attention is also called to the following important quotation from section 10 of the Act to Regulate Commerce:

"Any common carrier subject to the provisions of this Act, or, whenever such common carrier is a corporation, any officer or agent thereof, or any person acting for or employed by such corporation, who, by means of false billing, false classification, false weighing, or false report of weight, or by any other device or means, shall knowingly and willfully assist, or shall willingly suffer or permit, any person or persons to obtain transportation for property at less than the regular rates then established and in force on the line of transportation of such common carrier, shall be deemed to have violated the provisions of this Act, and shall, upon conviction thereof in any court of the United States of competent jurisdiction within the district in which such offense was committed, be subject to a fine of not exceeding five thousand dollars, or imprisonment in the penitentiary for a term of not exceeding two years, or both, in the discretion of the court, for each offense."

"Any person, corporation, or company or any agent or officer thereof, who shall deliver property for transportation to any common carrier subject to the provisions of this Act, or, whenever such common carrier is a corporation, any officer or agent thereof, who shall knowingly and willfully, directly or indirectly, assist, or shall willingly suffer or permit, any person or persons to obtain transportation for property at less than the regular rates then established and in force on the line of transportation of such common carrier, shall be deemed to have violated the provisions of this Act, and shall, upon conviction thereof in any court of the United States of competent jurisdiction within the district in which such offense was committed, be subject to a fine of not exceeding five thousand dollars, or imprisonment in the penitentiary for a term of not exceeding two years, or both, in the discretion of the court, for each offense."

(Name of person to whom claim is presented)

(Address of claimant)

(Claimant's Number)

(Name of carrier)

(Date)

(Carrier's Number)

(Address)

This claim for \$ (Amount of claim)

is made against the carrier named above by

(Name of claimant)

for in connection with the following described shipments:

(Loss or damage)

Description of shipment

Name and address of consignee (shipper)

Shipped from

(City, town or station)

To

(City, town or station)

Final Destination

(City, town or station)

Routed via

Bill of Lading issued by

Co.; Date of Bill of Lading

Paid Freight Bill (Pro) Number

; Original Car Number and Initial

Name and address of consignee (Whom shipped to)

If shipment reassigns enroute, state particulars:

DETAILED STATEMENT SHOWING HOW AMOUNT CLAIMED IS DETERMINED

(Number and description of articles, nature and extent of loss or damage, invoice price of articles, amount of claim, etc.)

Total Amount Claimed

IN ADDITION TO THE INFORMATION GIVEN ABOVE, THE FOLLOWING DOCUMENTS ARE SUBMITTED IN SUPPORT OF THIS CLAIM.

- { } 1. Original bill of lading, if not previously surrendered to carrier.
- { } 2. Original paid freight ("expense") bill.
- { } 3. Original invoice or certified copy.
- { } 4. Other particulars obtainable in proof of loss or damage claimed:

Remarks

The foregoing statement of facts is hereby certified to as correct.

(Signature of claimant)

Claimant should assign to each claim a number, inserting same in the space provided at the upper right hand corner of this form. Refund should be made thereto in all correspondence pertaining to this claim.
Claimant will please place check (X) before such of the documents mentioned as have been attached, and explain under "Remarks" the absence of any of the documents called for in connection with this claim. When for any reason it is impossible for claimant to produce original bill of lading, or paid freight bill, claimant should indemnify carrier or carriers against duplicate claim supported by original documents.

Persons present claims to a carrier will expedite settlement by furnishing the carrier with a complete and detailed statement of pertinent facts tending to establish the validity of their claims. It is the desire of carriers to settle promptly all valid claims, and the frank and heavy co-operation of the claimant is therefore solicited. Delayed settlement of claims is frequently due to the failure of the claimant to furnish the carrier with the necessary facts to establish the claim. It is the duty of the claimant to present and establish liability promptly. It should be borne in mind that carriers under the terms of the Act to Regulate Commerce are required to thoroughly investigate each claim before payment. Claimants should, therefore, in every case furnish the carrier, as far as possible, with the information and documents called for on the other side of this form, even though there may be instances when it appears to the claimant that the information called for is more than necessary to establish liability. It is the desire of carriers to settle promptly all valid claims, and the frank and heavy co-operation of the claimant is therefore solicited. Delayed settlement of claims is frequently due to the failure of the claimant to furnish the carrier with the necessary facts to establish the claim. It is the duty of the claimant to present and establish liability promptly. It should be borne in mind that carriers under the terms of the Act to Regulate Commerce are required to thoroughly investigate each claim before payment. Claimants should, therefore, in every case furnish the carrier, as far as possible, with the information and documents called for on the other side of this form, even though there may be instances when it appears to the claimant that the information called for is more than necessary to establish liability. For additional information from the claimant before making settlement.

to be filed with the carrier's bill of lading. Claims may be filed with the carrier's agent either at the point of origin or destination of shipment, or directly with the Claim Department of the carrier, and will be considered and adjusted on the basis of the information and documents called for on the other side of this form have, as far as possible, been applied. A duplicate copy thereof should be preserved by the claimant.

Claimants should read carefully the information appearing below.

IMPORTANT INFORMATION TO CLAIMANTS RESPECTING LOSS AND DAMAGE CLAIMS.

Before presenting a claim on account of loss and damage, the following Important information respecting claims should be given careful consideration:

1. The terms for which property is accepted and transported by a carrier are stated on the bill of lading issued by the carrier; also in tariffs and classifications issued or subscribed to by the carrier. Persons intending to file claims should, before doing so, examine the terms and conditions under which property was accepted and transported. If any part of the shipment in question was subject to the Regulations for the Transportation of Explosives and Other Dangerous Articles prescribed by the Interstate Commerce Commission, pursuant to Acts of Congress, the person filing the claim should know that all of these regulations applicable to the shipment had been complied with.

2. Carriers and their agents are bound by the provisions of law, and any deviation therefrom by the payment of claims before the facts and measure of legal liability are established with tender, them, as well as the claimant, liable to the fines and penalties by law. Attention is called to the following extract from Interstate Commerce Commission Conference Ruling No. 68:

"It is not the proper practice for railroad companies to adjust claims immediately on presentation and without investigation. The fact that shippers may give bond to secure repayment in case, upon subsequent examination, the claims prove to have been improperly adjusted, does not justify the practice."

3. In order that the carrier may have an opportunity to inspect goods and thereby properly verify claims any loss or damage discovered after delivery should be reported to the agent of the delivering line, as far as possible, immediately upon discovery, or within forty-eight hours after receipt of goods by consignee.

4. Pending the settlement of any dispute or disagreement between the consignee and the carrier as to questions of loss or damage to the property, the carrier may, at its discretion, may or may not, as possible, removal of damaged or destroyed things as well as any other loss or damage, by promptly accepting the property from the carrier. Such action on his part in no way affects the right to claim which may exist against the carrier.

5. Under the provisions of the 6th section of the Act to Regulate Commerce, it is unlawful for a carrier to charge or demand for collection or receive any greater or less or different compensation for the transportation of property than the rates and charges named in the tariff lawfully on file, not to refund or remit in any manner or by any device any portion of the rates and charges so specified. The refund or remission of any portion of the rates and charges so specified through the payment of fraudulent, fictitious or excessive claims for loss of or damage to merchandise transported is as much a violation of the law as a direct collusion or conspiracy to deprive from the published rates and charges.

In this connection, attention is also called to the following important quotation from section 10 of the Act to Regulate Commerce:

"Any common carrier subject to the provisions of this Act, or, whenever such common carrier is a corporation, any officer or agent thereof, or any person acting for or employed by such corporation, who, by means of false billing, false classification, false weighing, or false report of weight, or by any other device or means shall knowingly and willfully assist, or shall willfully suffer or permit, any person or persons to obtain transportation for property at less than the regular rates then established, and in force on the line of transportation of such common carrier, shall be deemed guilty of a misdemeanor, and shall, upon conviction, be fined not more than five hundred dollars, or imprisoned in the penitentiary for a term of not exceeding two years, or both, in the discretion of the court, for each offense."⁷²

[illegible]

claim papers have been received, and that railroad claim number of a certain series and number has been assigned to it, under which the investigation will be conducted.

Subsequent correspondence with the freight claim agent of the industry should refer to the railroad claim number, in addition to the industrial claim number, to facilitate the assembling and locating of the correspondence.

NUMERICAL ASSIGNMENT

As in the case of tracers, it is desirable to assign a separate set of numbers for claims, using a different prefix, preferably the letter C, followed by the number which has been given to a particular claim.

In the assignment of numbers to claims, there is no necessity of indicating the month in which the claim was filed; the letter prefix and the single numeral has been found to be sufficient. Obviously, the same number should not be used again after having once been assigned to a claim.

The advantage of the prefix is that on inbound correspondence, the correspondence clerk, or mail clerk, can readily identify the letters and distribute them to the proper individuals in the department. All numbers bearing a "T" prefix, for example, would be passed to the tracing clerk, and all letters bearing a number with a "C" prefix would be passed to the claim investigator.

The customary practice is to provide stout manilla backs for the correspondence, and on these is provided a space in which to insert the claim number. This stout back protects the lighter weight correspondence

paper and prevents the mutilation of the various documents and correspondence used to substantiate the claim.

THREE CLASSES OF CLAIMS

After the inauguration of the system, claims will resolve themselves into three classes as far as the industry is concerned: claims adjusted, claims declined, and claims in suspense.

RESURRECTION OF DECLINED ISSUES

While, temporarily at least, declined claims and those which have been adjusted are, for the time being, disposed of and apparently fall in the same class, it is recommended that declined claims be maintained in a separate file from the adjusted claims. The reason for this is that it is not unlikely that some court ruling or decision handed down at some later date will have a bearing on some of the declined claims, and that this decision may be resorted to as a lever to compel payment.

INTEREST AN ELEMENT OF DAMAGE

Under the Interstate Commerce Commission regulations, claimants are entitled to interest as an element of damage on overcharge claims. In drawing up the claim papers on such a case, a rubber impression stamp is frequently used to indicate across the face of the claim that interest is demanded on this claim at time of settlement for elapsed time after payment of excessive charges at the rate of 6 per cent per annum, in accordance with the ruling of the

Interstate Commerce Commission made as of October 14, 1912.

This has a salutary effect upon the investigation by the carrier. The claim is investigated with the utmost dispatch and reparation made to the claimant as soon as possible, in order to reduce the amount of interest to be paid the claimant.

FILING DEVICES

For the accommodation of claims held in abeyance, that is, those which are under investigation and on which correspondence is continued, ordinary vertical letter files are recommended.

A single tier or so of three drawers should suffice to accommodate the requirements of the claim department of even a large organization and be sufficient for some little time to come. Should the necessity for additional space become apparent, this can be provided by procuring additional units of the same size and construction.

CLAIM ACCOUNTING: BOOK RECORDS

To measure the efficiency of the department in the recovery of amounts involved in claims, various forms of claim registers are available, but no one form can be recommended as adequate for all purposes. The following suggestion, however, will suffice in the majority of cases and in form it may be a bound book to suit the individual case or requirements or, preferably, one of the many loose-leaf devices available.

Fig. 27 provides vertical columns to show the industrial claim number; the carrier against whom the claim

Claim Register.

Claim No.	Carrier	Nature of Claim	Date	Original Point of Shipment	Date Shipped	Way Bill No.	Car Number	Consignor	City

Description of Shipment	Weight	Rate	Charges Paid	Correct Charges	Amount of Claim	R. R. Claim No.	File No.	Disposition	Remarks

FIG. 27.—A Claim Register

is made; the carrier's claim number; the date on which the claim was filed; the kind of claim—overcharge, loss, or damage; the amount of the claim; the disposition of the claim—paid or declined; and the date on which the investigation was concluded, or payment received.

In passing, it should be stated that the form indicated in Fig. 27 is somewhat condensed and the columns, or at least some of them, particularly those headed "Consignor," "City," "Description of Shipment," would have to be somewhat wider to accommodate the information that might have to be shown therein.

This form is a daily register and can be added to as the occasions may warrant without disturbing the previous records of claims.

The footings appearing on the bottom of the sheet enable the industry to carry forward, from sheet to sheet, the number of claims and the amount involved so that the financial status of the department can be determined at any time.

Plan of Index

The territorial plan of index is recommended for use in connection with the overcharge or loss and damage claim. A shipment consigned to James Noble, Hopkinsville, Ky., would be indexed as indicated in Fig. 28.

KENTUCKY

Destination	Consignee	Date of Shipment	Kind of Claim	Carrier	Claim Number
Hopkinsville	James Noble	1-22	Loss	Ill. Cent.	C-14133
Louisville	H. H. Mudge	1-30	Overcharge	Lou. & Nash.	C-17147
Covington	N. J. Doble	2-20	Damage	C. C. C. & St. L.	C-18160
Ashland	National Steel Co.	3-4	Overcharge	C. & O.	C-18175

FIG. 28.—Claim Index

VOCATIONAL TRAINING

Both overcharge and loss and damage investigators should be encouraged to take courses of training in traffic work and in legal procedure to bring to them a fuller realization of what is required in the discharge of their duties, and to develop such latent talent as they possess.

Periodical statements should be drawn off indicating the volume of business handled in the department so that the efficient and worthy may be rewarded.

CHAPTER X

SERVICE DIVISION

Bills of Lading—Various Forms—Shipping Receipts—Rates
—Routes—Drafts — Manifests — Export Licenses — Filing
Records—Index Systems—Car Order Clerk—Ordering
Cars: Forms—Car Record Book—Record Movements—
Daily Record.

This chapter contemplates an exemplification of certain phases of the work of the industrial traffic department too limited in their scope to require an extended discussion. For the purpose of maintaining the balance of the chapter, they are grouped under this general head.

BILLS OF LADING

Various shipping forms are used to establish delivery to the carrier, and to furnish the carrier with the necessary shipping instructions, information as to the consignee, his address, and the route to employ.

The form most generally used is the so-called "bill of lading," which is quite ably treated in a textbook, *The Bill of Lading*, by Mr. F. A. Larish, of the Western Freight Traffic Association, and published by LaSalle Extension University, Chicago.

As applied to rail carriage, bills of lading fall into two classes—the order form and the straight form. Each of these forms in turn is arranged in pads containing four sets of the bill of lading: (1) the original bill

of lading, (2) the duplicate, (3) the shipping order, and (4) the memorandum.

The original bill of lading is usually sent to the consignee, or, if it be an order shipment, to the bank at his place of business so that he can obtain possession of it and, by this means, possession of the goods.

The carrier retains the duplicate as a station record of the shipment, and as the shipper's instructions from which its billing is made and to which, in the event of controversy, reference is to be made.

The shipping order and the memorandum are retained by the industry.

Where shipments are made for the account of some jobber, these four sets are used as follows: the original is sent to the consignee, and the duplicate to the jobber; the memorandum is retained by the shipper, and the billing instructions, or shipping order, is retained by the carrier.

In instances where jobbers are not involved, sets of three will be sufficient, namely, the original bill of lading, the shipping order, and the memorandum.

The forms are arranged alike and bear the same conditions; so it is possible, and, in fact, customary to make out the several forms at one operation by the use of carbon paper or other manifold processes.

Since the bill of lading serves a dual purpose, in that it is a receipt for the goods shipped and sets forth the contract of shipment between the shipper and the carrier, great care should be taken in making out these documents. If the activities of the department warrant it, it is recommended that a bright young man be employed in a junior clerical capacity for this sole purpose.

It has been said before that service and rates are

the controlling essentials with respect to transportation offerings. But a customer may wish to get his goods with all possible dispatch, and as a consequence rates become secondary; or he may be in no particular hurry for the goods, and expects them to be forwarded in the least expensive manner.

Many clients, however, leave this matter entirely to the judgment of the firm. Some industrial concerns express themselves on the subject in this way: When the matter of shipment is left to us, we always choose the cheapest method. This includes not only the selection of routes but packing as well. When this responsibility rests with the industry, it is well to have the quotation clerk insert on the bill of lading the rate of freight applying from point of shipment to destination, and the route over which the rate applies.

In this connection, attention is directed to the slip, Fig. 29, that is sent to customers of the Baker-Vawter Company with their bills of lading. It may well be inferred that the practice adds materially to the satisfaction of their clientele.

SHIPPING RECEIPTS

Many commercial houses and industrial enterprises are concerned with limited items of shipment. The outbound shipments of a patent medicine plant, for example, are jugs and advertising matter. Or, on the other hand, the individual shipments of a wholesale grocery house might be so numerous and diversified that it will be impracticable, if not impossible, to indicate them in the spaces provided for that purpose on the bill of lading.

As a result of this condition, individual lines of

A NEW FEATURE OF BAKER-VAWTER SERVICE

Our traffic man, Frank E. Coombs, spends most of his time looking out for our customers' interests.

Now he is showing the correct freight rate on all Bills of Lading to make sure that you pay the very lowest amount of freight on shipments from Baker-Vawter Company.

Look at the Memorandum copy of the Bill of Lading enclosed with this notice. Right above your name you see some headings and in one of them the correct rate from Benton Harbor, Michigan, to your town.

When you get the freight bill, check it up with this Bill of Lading to see that you are charged the correct weight and the correct rate. In other words don't pay more than you should.

During the past few months, Baker-Vawter Company has collected from the railroads overcharges amounting to a large sum.

Yes, it costs money to do this, but it will save you money, and will help gain and hold the good will of enough of you to mean more business to Baker-Vawter Company.

Honestly, now, can you get such service elsewhere?

BAKER-VAWTER COMPANY

*Manufacturers of Baker-Vawter Ledgers, Accounting Records
and Binding Devices, Steel Filing Sections and Supplies*

CHICAGO BENTON HARBOR, MICH. HOLYOKE

FIG. 29.—A Service Announcement

endeavor have devised special shipping forms to suit their requirements. These forms list the articles in which they deal, and provide an appropriate space in which to indicate the number and style of packages that may be shipped. A notation or a clause provides that the shipment so described is subject to the terms and conditions of the uniform bill of lading of the carrier.

In cases where these special forms are practicable, their use will eliminate a considerable amount of clerical labor necessary in preparing the usual bill of lading form.

DRAFTS

For the delivery of goods sold on consignment, C.O.D. as it were, and transported by freight, the so-called "shipper's order form of bill of lading" is used. The industry notifies the customer at destination and consigns the shipment to his order. To get possession of the goods, the notified consignee must first obtain the bill of lading from the local bank by paying for the shipment.

Where such bills of lading are prepared by the traffic department, the original copy, after it has been properly executed, should be passed to the financial department so that the draft, invoice, and other necessary documents can be attached, and the negotiable papers then transmitted to some bank at destination, and the customer notified so that he may be prepared to accept the shipment on its arrival.

MANIFESTS

On shipments destined to foreign countries, adjacent or nonadjacent manifests are required. They are

intended primarily for the convenience of the customs officers.

A specimen form of manifest appears in Fig. 30. Detailed instructions are printed on the back of this form for the guidance of shippers. Under normal conditions, no goods can be shipped out of the country until such a manifest has been satisfactorily filed. Special attention is directed to the necessity for careful and accurate description of the goods that are being shipped. The shipper is required to certify to the correctness of the manifest, either in person or thru a duly authorized representative whose credentials have been filed at the customs house.

This matter, however, pertains especially to the export department, a subject which will be considered in another section of this work.

EXPORT LICENSES

In times of war, it is necessary to curtail the exportation of foodstuffs and materials that are needed to prosecute the war successfully, and as a consequence, the government intervenes and prohibits the exportation of such goods.

To make sure that alien enemies residing in the country do not circumvent the prohibitions of the law, export licenses are required. The first step in making a foreign shipment is to procure such a license.

Regulations such as these are issued by various war trade boards appointed by belligerent countries, and in cases involving shipments from or to countries engaged in war, the question of whether export licenses are required or not, should be given careful consideration.

Read carefully to avoid delay at shipping point.

Export license number and date of expiration must appear immediately above goods shipped thereunder

ing the description on the 1

Address of person, corporation, vessel, Government, etc., to whom transferred or delivered, must be stated on this form.

the declarations may be attached thereto or mailed separately to the consignee at the seaboard

Contract properly prepared direct to the agent.

vessel, or party named to attend to exportation

If any vessel bound to a foreign port departs on her voyage without delivering manifest and obtaining clearance, the master or other

Similar provisions apply to exportations by rail, vehicle or ferry. (See Sec. 1, Act March 3, 1893.)

be stated in the column of "U. S. Products."

should be reported as a domestic product.

ery, etc., can not be accepted. In the case of Chinese the designation of uncolored, butler whetser pure, adulterated or renovated

d. Domestic spirits exported must be stated in gallons of 50 per cent alcoholic strength.

the Netherlands, Germany and France en route to other countries.

more, Washington, D. C., and will be of much assistance to exporters.

ing, color and arrangement.

To the Collector: I hereby authorize

exportation of the within-described goods. Please deliver the certified duplicate accordingly.

Shipper.

The preparation of these documents, the bills of lading, manifests, and export licenses may be placed in the hands of the bill of lading clerk.

FILING RECORDS

Too much stress cannot be laid upon the necessity of having adequate records so that the absence of an employee charged with a particular function will not throw the traffic machine out of gear. All records should be in a definite order so that any member of the department can refer to them and locate the desired information. Each shipment has assigned to it an invoice number by which that particular shipment is identified in the account of the firm, and the invoice number is used as the index number of the bill of lading.

That is to say, the invoice number assigned to a shipment is shown as the number of the bill of lading in the space provided therefor, and the memorandum bills of lading are then filed in numerical order according to such numbers. Each shipment has assigned to it an invoice number by which that particular shipment is identified in the account of the firm, and the invoice number is used as the index number of the bill of lading. That is, the invoice number assigned to a shipment is shown as the number of the bill of lading in the space provided therefor, and the memorandum bills of lading are then filed in numerical order according to such numbers.

The foregoing system has proved quite satisfactory in the great majority of cases.

Some concerns, however, do not conduct their commercial transactions in this manner, and must devise

some other number scheme or filing system for the accommodation of this record.

One plan that finds general favor is the so-called "state territorial arrangement," whereby memorandum bills of lading are sorted out, first by states, and the towns, or destinations, are then arranged alphabetically under each state. The bills of lading so sorted are then distributed in compartments or divisions of vertical correspondence files, or, if preferred, in letter boxes of cheap construction.

INDEX SYSTEMS

The adoption of either of the foregoing schemes precludes the necessity of an elaborate index. In one case, the invoice number is sufficient, and in the other, the consignee's name and address will locate the bill of lading.

Other traffic departments, however, number their bills of lading consecutively, starting with the number "1" the first of each year, and prepare an index to cover various periods. This index is arranged on the territorial plan, first by state and then by destination under state.

CAR ORDER CLERKS

The question of car supply as applied to industries doing a considerable volume of carload business, both inbound and outbound, is one of increasing vexation.

The duties of the clerk charged with the supervision of this angle of traffic work are to secure the necessary cars for the accommodation of outbound shipments, and to arrange for the prompt release of those coming into the terminal for the industry.

He must have some knowledge of clearance of the various railways, and must know what size of car—width and height—may be run thru to destination via such routes.

Likewise, he must have a knowledge of the cubical capacity of cars, and some knowledge of the displacement quality of various items of the firm's output, so that in shipping articles where the charges are to some measure contingent on the size of car used, he can minimize the transportation expense by securing a car of proper dimensions.

ORDERING CARS: FORMS

For the purpose of ordering cars, the American Railroad Association has prescribed a standard form, which appears in Fig. 31.

This form should be filled out to indicate the number of cars required. It may be that at certain times two or more cars will be required to transport a shipment of goods. It must also indicate the kind of car—stock, gondola, box, or refrigerator; the nature of the shipment—package freight, coal, live stock, or whatever it may be; the date on which shipper will be ready to load; the destination of the shipment; and the lines and junctions by which the car or cars are to be routed.

This form is then sent to the local agent of the interested carrier, who in turn transmits it to the train dispatcher or local car distributor so that the necessary arrangements can be made and equipment of the desired kind secured at the time needed.

In municipal centers, it is especially desirable to indicate the place where such cars are to be "spotted"

Agent's Order No. _____			Shipper's Order No. _____			
_____			Chicago, Illinois. _____			
_____			116 S. Michigan Avenue.			
Dear Sir:			Kindly arrange to furnish empty cars (not previously ordered) as designated below. It is hereby agreed that cars will be loaded, consigned, and routed as indicated.			
Cars Wanted		Date	Where	Lading	Destination	Route
No.	Kind	Length	Wanted			
			Yours truly, LASALLE EXTENSION UNIVERSITY			

Fig. 31.—A Car Order Form

for loading, using the most accessible point so that teaming or trucking cost may be reduced to the lowest possible figure. Where the industry is equipped with private siding or spur track, this, of course, is not necessary as the order can be so phrased as to provide for the placement of the car or cars on that track. This form can be filled out in duplicate and a copy retained by the car order clerk, so that it may be followed up with the carrier, and no unnecessary delay involved in securing such equipment.

It is customary for the railroad company to notify the shipper when the cars are placed in suitable or designated locations for loading. A condition attaching to such a notice is that if the cars are not promptly loaded, a charge (demurrage) will be assessed against the car for its undue detention.

For the accommodation of the duplicate orders, a small desk card index file is recommended. The duplicates of the cards are filed as soon as the request is made, and are removed as soon as notification of placement is received.

CAR RECORD BOOK

Another adjunct that will be found of considerable assistance is a car record book. A substantial, tho not necessarily expensive, journal or ledger book may be used for this purpose, provided it has a sufficient number of pages to run a sequence of numbers starting with 1 and ending with 100.

The page numbers correspond with the last two numbers of the car number and are the key to this record. For example, Illinois Central Car 148075 would be entered upon page 75 as I.C.-1480; C. B. & Q. car

24701 would be entered on page 1 as C.B.&Q.-2470. These numbers combined with the number appearing on the page would give the complete car number.

Inks of various colors may be used to distinguish inbound movements from outbound movements. Purple ink, for example, might be used to designate the former, and red ink to designate the latter. Appropriate columns could then be ruled to provide for shipping points, destinations, date of shipment, date of arrival, and date of delivery.

The car order clerk should be furnished with information respecting carload shipments to and by the industry so that they may be entered in this book. In addition, he should prepare a daily chart indicating the cars in transit and cars at terminals so, where necessary, steps can be taken thru the tracing clerk to expedite their movements, or to hasten their loading or unloading. In the latter case, particularly, unnecessary demurrage charges can be avoided.

He should also be required to maintain statistical reports indicating the average loading of inbound and outbound cars, as frequently this may be of value in rate cases.

CHAPTER XI

THE SHIPPING ROOM

The Shipping Room: Packing; Packing Foreign Orders; Keeping Accurate Record; Rates and Space; Packing to Save Charges; Standardized Packing Instructions; Efficient Packing Dependent on Container; Measuring Shipments; Containers; Definitions; Materials; Waste in Use of One-Trip Containers; The Problem; Strong Containers but Low Rates; Marking; Weighing; Weighing Agreement.

Since lax methods in the shipping room offset the effectiveness of the work of the traffic department, the shipping room should be placed under the control of the industrial traffic manager.

The shipping room is concerned with the actual preparation of goods for shipment, and with the receipt of goods coming into the plant. The administration of this department should be vested in the traffic department in order that the labor of the shipping room employees may be intelligently directed, and that standard practice rules may be established to govern them in the handling of their work.

PACKING

American industry has scarcely begun to consider the economical and effective packing of shipments. The rule often has been to make the shipment fit available

containers rather than to build a container to fit the shipment. As a result, American shippers have gained the unenviable reputation in other countries of being the poorest merchandise packers in the world.

PACKING FOREIGN ORDERS

With our advent into foreign fields on a large scale, however, comes the need of extensive reform. Mr. B. Olney Hough, Editor of *The American Exporter*, in his work entitled *Elementary Lessons in Exporting*, says:

Probably 999 out of every 1,000 differences that arise between shipper and foreign consignee are based upon a claim that the goods are not exactly what were ordered or shipped exactly as instructed. There is positively no latitude allowed the shipper in the case of foreign orders. If the order cannot be executed and shipped in exact accordance with every detail of the order, then the customer should be so written, with a full explanation of what can be done, and the order meanwhile held, awaiting definite instructions to ship in accord with the manufacturer's modifications of the original details.

Many manufacturers are so anxious to execute orders received and believe so thoroly in their own ideas as to what goods will suit, or what details in shipping will be preferable that they are tempted to take the chance and forward the goods in their own way. This may occasionally result to the customer's satisfaction, but the chances are at least 100 to 1 against it, and it will be found far preferable in the end to risk losing the order thru delay rather than to ship any other way than that specifically instructed by the customer.

The great general rule of exactitude is the basis also for a second consideration. In packing goods for export the contents of each case must be checked and controlled with very special care. It will probably be acknowledged that shipping

clerks are sometimes careless, and may sometimes even be disposed to make affidavits a little freely as to goods which they are credited as having packed into certain cases. This at least, was true when the writer in his cub days served in this department of a factory. He is afraid that he and his fellow shipping clerks may perhaps sometimes have sworn to having packed goods which customers declared were missing on arrival when accident ultimately discovered the self-same goods still in stock at the factory.

How peculiarly irritating such an occurrence is to foreign exporters can hardly be realized by Americans who have not had business experience thousands of miles away, or on the other side of the globe. On one occasion the writer was engaged in business in a foreign country, and personally saw unpacked a case of goods from an American manufacturer of tools, when a dozen of a certain article invoiced by the manufacturer was found to be missing. The case was absolutely full, and repacking the same goods in the same case and in the same manner left not a spare inch of room into which the missing goods could have been placed.

A claim transmitted to the manufacturer resulted in the usual affidavit that the goods had been packed and shipped. This was not all. The manufacturer went out of his way to insinuate first, that the missing goods had been stolen in transit and, second, and more injudicially, to insinuate dishonesty on the part of the consignee himself. That is to say, on the part of the consignee's employee. The manufacturer, naturally enough, never received a repeat order. In the writer's opinion it would have been far wiser for a manufacturer to have replace the missing dozen, or credited its value, no matter how thoroly convinced that he had actually shipped the goods.

RATES AND SPACE

A problem of the utmost importance is that of space, particularly in transportation by water. Rates are

computed on a weight or a measurement basis, according to which yields the greatest revenue. Practically all merchandise is taken on the measurement basis, and the use of needlessly bulky containers results in a direct loss.

It is the function of the traffic department in such cases to make a survey or analysis of the firm's output, and to determine the most economical style of packing. In fixing the standard to be employed, the safety of the goods should be of paramount importance. If a customer, for example, purchases a saw, and if it be shipped loose, unprotected by packing, and consequently is so damaged as to be unusable, the purchaser would be more inclined to censure the shipper than the carrier.

On the other hand, if the saw could be affixed to a stout board, it would be sufficiently protected to withstand the ordinary hazards of transportation, and the customer, assuming him to be liable for the freight charges, would be called upon to pay a transportation bill materially less than if a box were employed. Moreover, the industry would save money, because a board costs much less than a box.

The packers should be provided with a complete invoice of the order, indicating the various items that comprise the shipment. This list should be carefully checked with the actual goods received from the order pickers, and any discrepancy should be verified before the packing is undertaken.

After the goods are packed, the packer should be required to insert a slip, indicating that the goods were packed by a designated packer (numerals may be used to indicate individuals). Thus any subsequent contention as to what was or what was not in the package,

or any question as to the sufficiency or insufficiency of the packing, may be taken up with the employee at fault.

These, however, are details which will have to be worked out to fit special cases. Often a satisfactory system can be evolved only after long observation of various shipments to determine what type of packing is the most satisfactory.

PACKING TO SAVE CHARGES

Freight and express rates are sometimes lower on boxed or on crated articles, and sometimes no lower. For example, castings, forgings, and parts of agricultural implements enjoy the same rates loose as boxed, because they are practically unbreakable under ordinary transportation conditions. The cost of packing may therefore be eliminated or greatly reduced by shipping in bundles or burlap sacks.

Standardized Packing Instructions

For the guidance of packers, and for shipping room employees in general, the traffic department should prepare a chart, indicating the various items that are handled by the industry, the ratings applying on these articles under the various classifications, and the packing specifications that are to be observed.

If the classification provides that a shipment must be made in a box, and if it is shipped in some other form, a heavy penalty attaches. In such a case, if a crate is used, the customary classification provision is that the next higher class rating applies; in some instances this may mean an added cost of \$1.50 or more,

which, in all probability, more than offsets the saving effected by the use of the less expensive crate.

Sorting Shipments

Where a large shipment consists of miscellaneous items, goods should be sorted according to the rating assigned to their classification. That is, all goods falling in the first class should be assembled in one lot, all goods falling in the second, third, and fourth classes should be assembled in corresponding lots, and separate containers should be provided for each lot. The industry and its patrons will then be sure to get the benefit of the lower rate for the lower classes. If goods belonging to different classifications are shipped in one package, the charge is assessed on the total weight, at the rate for the highest rated article contained in the package.

EFFICIENT PACKING DEPENDENT ON CONTAINER

Great Britain, Germany, France, Italy, and Japan, rivals for the trade supremacy of the world, have long specialized in efficient packing methods and the development of damage-proof containers. A visit to any one of our seaports, where containers which are made in America can be compared with those which are made abroad, is sufficient to convince our captains of industry that we must make giant strides in this direction if we are to share the world's trade after the war ends.

This general complaint is perhaps not so true of the specialized or one-line industry. For example, we ship canned goods, or any commodity that lends itself to a very compact and condensed form of pack-

ing, with some success, tho in this case, too, the iron-strapped or wire-strapped case employed by foreign shipping interests has proved better.

Conserving Space

Complaints arise chiefly from inefficient methods employed in packing shipments comprising a variety of articles ranging, for example, from anvil to curling iron, with hosier, foodstuffs, and ostrich plumes as part lots. In a great many cases little or no attention is paid to the strength of the outside container, nor to the efficient utilization of the space within. Consul General J. A. Britton, Sidney, New South Wales, reiterates a complaint of long standing. He says:

In speaking of strapping cases of merchandise for export, the Sidney Chamber of Commerce says in some instances the cases are found with wire one way only, the wire running with the boards, securing one board and leaving others unprotected. It is suggested that the cases be bound both ways, that is to say, at right angles to the line of the board and another band of wire running with the boards and thus insure a better safeguard against pillaging.

The question of pillaging at the Sidney wharves is a very serious one. It is alleged that the annual loss from this cause at the wharves and in transit amounts to \$500,000.

Owing to the constant advance in freight rates, many importers here have called attention to the necessity of conserving all space in packing various kinds of merchandise. In certain instances, it is claimed that a saving of ten to thirty per cent in space can be effected thru closer packing. This applies not only to the packing of the merchandise in cases too large for the contents, but equally as well to the pasteboard boxes containing merchandise. It is said there is frequently twenty-

five per cent waste space in these boxes. When one considers that the transportation of a ton of freight costs \$50, it can readily be seen that the purchaser does not desire to pay for waste space, thus adding to the actual cost of freight on his consignment. It has also been suggested that the various shippers of motor cars and machinery should standardize packing cases wherever standardization is possible, thus saving not only tonnage, but lumber in constructing the case.

MEASURING SHIPMENTS

Some of the large concerns of this country have turned these suggestions to account by adopting the device of assembling a shipment on a table or platform. It is measured by a form in the shape of a skeleton box, which is provided with movable sides and a measured framework. This enables the packer to determine the exact size of the container required, whereupon a box of that size is constructed. This plan, while entailing a little more initial expense, is most economical in the long run because of satisfied customers, reduced transportation expense, and lessened lumber bills.

The suggestions just made apply not only to export business, but also to domestic trade.

In the case of domestic shipments, various ratings are provided for the same article according to the manner in which it is prepared for shipment. Hand crosscut saws, for example, when shipped without packing protection, take a rate of one and one-half times first class; when on boards, they take a first-class rate; when in crates, a second-class rate; and when in boxes, a third-class rate. These ratings, it may be observed, decrease as the risk incurred in transporting the article decreases. Obviously, a saw

completely boxed is much less susceptible to damage than one not packed, or one packed on a board or in a crate.

In the case of miscellaneous shipments weighing as little as 200 pounds, except when the rate is unusually high, it is not economical to sort out the goods into separate containers. The increased cost of separate containers offsets the saving effected under the lower rating for a part of the shipment.

CONTAINERS

Definitions

It is to be regretted that transportation agencies have failed to define accurately what is a box and what is a crate, etc. At present it is very difficult to decide what is a box or a crate, a bale or a bundle. Tho an attempt has been made by the classification committees to define these containers, as yet the situation is unsatisfactory.

Materials

The need also exists for tests of the merits of various materials for containers. Many shippers have found that fibreboard containers afford as secure protection as those of wood, and cost somewhat less. An added advantage of fibreboard containers is that when folded, they require less space for storage, and thus render valuable space free for other purposes.

Waste in Use of One-Trip Containers

The use of the one-trip container is very expensive. Professor Breed, of the Massachusetts Institute of

Technology, is reported to have demonstrated that \$120,000,000 is annually spent for wood containers used only once and then destroyed. Mr. John H. Leonard, editor of the last report of the Interstate Commerce Commission, in *Freight Handling and Terminal Engineering*, says:

During the year our railroads paid \$32,000,000 for loss and damage claims, of which amount fully one-half could have been saved by substantial containers and the whole question is now recognized as a question of containers.

In strong containers, eggs, the most fragile of staple commodities, have been brought uninjured from Russia to Pittsburgh (9,000 miles). In weak, three-sixteenths-inch wood cases, or crates, prescribed by the railroads, eggs are destroyed or damaged every month to the value of thousands of dollars while being carried short distances—frequently less than 100 miles.

In the old days when cases were made strong, damage claims were rare, and under free rates the empty cases were returned and used again and again.

To-day the railroads are urging the shippers to use strongly built cases which would weigh twice the present weight, and three-fold charges for carrying them. Even if built strong enough for repeated use, the return freight would bar this, for even on short hauls, these would exceed the cost of the present fragile containers. Plainly the first move toward the solution of this problem must come from the railroads and the move seems easy. Let them decide, jointly if possible with the shippers, on a standard type of container of such strength and quality as will afford the utmost protection against all forms of loss and damage and invite and encourage its use by free transit one way, or the same charges that are now made on fragile containers of like capacity.

One of the most recent indestructible containers is that provided by the Pneumatic Scale Corporation.



FIG. 32.—A Multitrip Container



FIG. 33.—Shipping Room—National Cash Register Company

This is a collapsible device designed to avoid many of the defects of the one-trip containers. This device is illustrated in Fig. 32.

MARKING

Cases should preferably be marked with brush or stencil. Tags and labels ought never to be employed. The method of marking foreign shipments, however, may depend on regulations established by various countries. In shipping to Chile, South America, brush addresses are not permitted; stencils only must be employed. Shipments to the Argentine may be marked either by brush or by stencil; the address must be printed on four sides of the package.

The illustration shown in Fig. 33 shows the operation of the shipping room of the National Cash Register Company. In the case of this plant, a machine is shipped to one customer to-day and a similar machine to another one to-morrow and for such a product the company has found the Dart Marking Machine, made by the Dart Marking Machine Company, of Hartford, Conn., almost invaluable. It prints in legible and unmistakable characters the name and address of the party for whom the box is intended and rarely, if ever, is this company confronted with any query as to whom a shipment may be intended for.

Rough iron castings, iron bars, and similar goods, which are shipped without any packing protection, frequently do not present a surface large enough to receive the address, and, as a consequence, tags must be used. The classification regulations of the carriers contain elaborate rules for marking, and usually require that tags, if used, must be of some construction strong enough to withstand the strain they must endure.

The necessity for extreme care in marking is evidenced by the numerous consignments that turn up at various points on the lines of the carriers of this country without any marks or directions which will enable the carriers to determine where the property belongs.

WEIGHING

The question of weight and weighing produces much controversy between shippers and carriers. Upon receipt the railroads weigh property delivered to them in less-than-carload lots, except that covered by an authorized weighing association agreement. Because of haste or carelessness, the weight so obtained often differs materially from the actual weight of the consignment.

In weighing carload shipments, the practice of weighing cars coupled in trains, and even in trains in motion, obviously is likely to produce error; and not infrequently an error in the gross weight or the tare weight will produce a serious overcharge on an incorrect net weight.

In weighing less-than-carload shipments, the scaler sometimes neglects to deduct the tare weight for the truck and truckman. Shipments are sometimes billed out on a weight that includes the consignment proper, the truck on which it is loaded, and the truckman who is to take the shipment to the proper car, as shown in Fig. 34. While, fortunately, these cases are relatively few, the possibility makes necessary an efficient system of weighing and of recording the weights of shipments in the shipping room, so that in extreme cases, or in those which involve considerable money, the shipper can protect his interests.

Since the railroad charges vary according to the

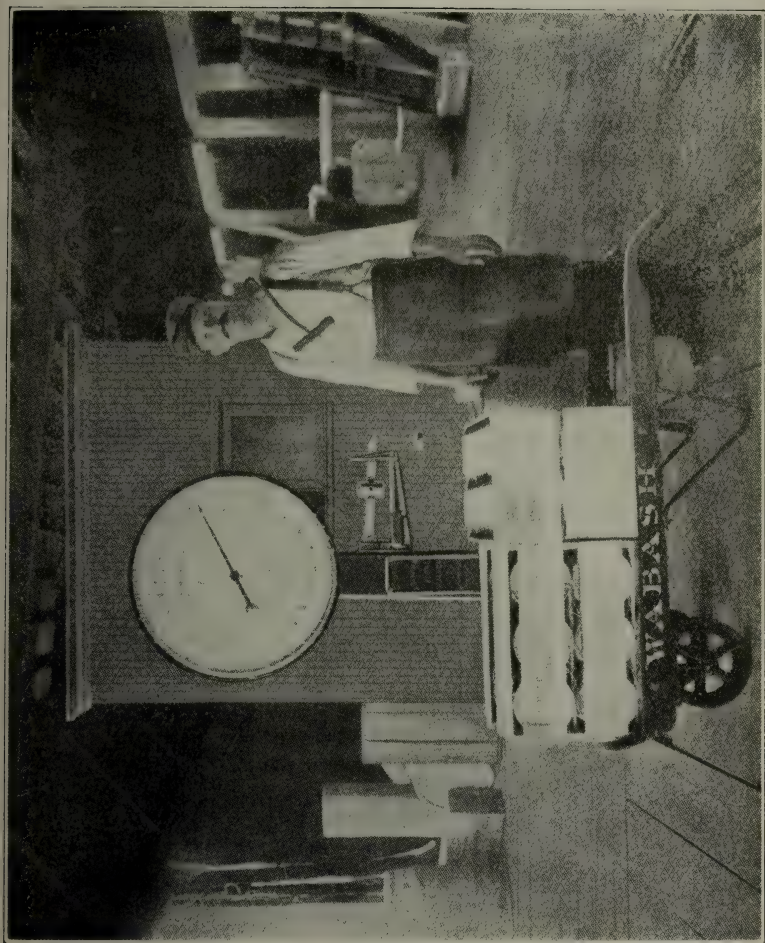


FIG. 34.—An Automatic Scale—Krohn Type

class of article or the classification rating assigned to the component parts of a shipment, it is desirable to weigh the several groups or pieces separately, so that the individual weight of respective portions may be definitely known.

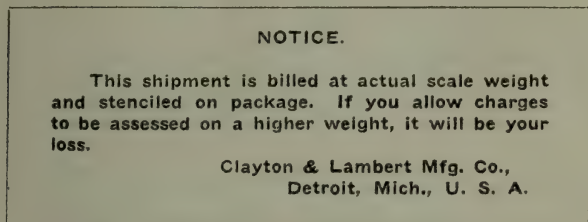


FIG. 35.—A Weighing Notice

Many concerns have adopted the practice of marking the weight on each package, and of affixing a note on the bill of lading to the effect that this has been done. Thus they caution the consignee to pay no charges upon a weight in excess of that figure without first assuring himself that the weight is as claimed. Many overcharge claims by this plan are nipped in the bud. Fig. 35 reproduces such a notice.

WEIGHING AGREEMENT

If an industry produces a line of products that are standardized in shape, size, or number to a package, it is possible to make a so-called "weight agreement" with any one or all of the several weighing and inspection bureaus maintained by the carriers. Representatives of the bureau will weigh a number of packages to determine the average weight that is satisfactory to the industry on the one hand and the carriers'

representatives on the other. The weight so ascertained is used as the basis of transportation charges, thus eliminating the expense of weighing shipments on the industry's premises.

CHAPTER XII

LOCAL TRANSPORT

Assembling Outbound Shipments—Terminal Delays—Analyzing and Charting Facilities—Charting the City—Routing and Saving—Elastic System—Receipts for Damaged Packages—Long-Distance Service.

This chapter treats not only of local deliveries and pick-up service maintained to serve local patrons, but also of cartage to and from the different receiving stations of the carriers that are situated in various parts of a large city.

ASSEMBLING OUTBOUND SHIPMENTS

It is important that sufficient space be provided in the shipping room or on the shipping platforms, so that when goods are ready for delivery to the railroads and are about to leave the plant, they may be assembled in full truckloads. A large concern shipping many truckloads a day should sort out and route its packages. Individual full truckloads may thus be sent to each of several receiving stations or a mixed truckload may be sent to several receiving stations near each other. Intelligent planning results in material economy.

A motor truck or a horse-drawn dray represents a substantial investment and a heavy and continuous overhead expense which goes on whether it is in use or not. As a consequence, it should not be kept busy

with fractional loads; several trucks ought not to be covering the same routes with mixed loads; and finally, no truck should lose valuable time unnecessarily awaiting the receipt or delivery of its lading at either the plant or the receiving station.

TERMINAL DELAYS

In a study of terminal delays made by Mr. David Bancroft, editor of *The Motor Age*, the statement is made that losses of time at terminals are due to four causes:

1. Loss of time because of congestion in the street leading to the depot and from it. This congestion is sometimes due to the lack of adequate police control, at other times because of the narrow streets and again is caused voluntarily by the drivers.
2. Delay due to trucks waiting in line to reach the loading or unloading platforms at the freight depots, caused generally by long waits for bills of lading, insufficient loading platforms, or not enough doors in the freight houses. (See frontispiece.)
3. Loss of time in unloading because one man often has to unload a five-ton truck; because not enough hand trucks are in the freight depots; because there is a deplorable lack of system with the freight sheds; because there is a lack of clerical force at the freight house to handle the numerous shipping documents and bills of lading.
4. The driver, the human factor in the case, is often the "Czar" of the situation, and generally he is the greatest waster of time in the entire freight system of a city.

In the case of the New York Team Owners Association et al. v. the New York Central & Hudson River Railroad Company et al., the subject of terminal deliv-

eries and delays was thoroly examined before the Interstate Commerce Commission.

The complainant in this issue pointed out that for the most part, transportation experts have confined their activities to speeding up the line haulage or road performance, that "they have left the freight terminal with its gross imperfections severely alone." "The terminal is a dumping place. To reform a dumping place is not an heroic thing to do, however necessary it may be. There is no poetry in speeding up the movement of a humble package from the corner of a pier or of a freight house to the teamster's wagon. There may be no acclaim in store for him who discovers a method of so doing; but unless some means of speeding up the movement of freight thru the terminals is found, * * * the rapidity of line haul is wasted effort."

The amount of expensive time wasted by trucks at freight terminals is clearly shown by the record of one truckman at Pier 27, North River, New York, shown in Fig. 36.

The solution proposed by the complainant was that the carriers should make inbound goods conveniently and readily accessible to the teamsters in one of two ways: (1) by promptly permitting them to back up their wagons and to bring the tailboard to the place where the goods ought to be; or (2) by bringing the goods to the tailboards of the wagons.

Some of the delinquencies attributed to the prevailing practice in this proceeding were:

1. The carriers do not separate, segregate, or make conveniently accessible to all consignees, merchandise unshipped at their terminals.

RECORDS OF ADAMS BAIST COMPILED FROM EXHIBIT NO. 41,
SHOWING DISTRIBUTION OF TIME AT PIER 27.

FROM MARCH 31, 1914, TO APRIL 4, 1914.

TUESDAY, MARCH 31, 1914.

TIME

Arrived at Penna. R. R. Co. Sta. 27 N. R.....	1:20 P. M.
Applied at notice clerk's office for arrival notices.....	2:03 P. M.
Paid charges at cashier's office.....	2:14 P. M.
Started locating freight and loading same.....	2:20 P. M.
Left dock	3:35 P. M.

How many packages—28.

Total time, 2 hours 15 minutes.

WEDNESDAY, APRIL 1, 1914.

Arrived at Penna. R. R. Co. Sta., Pier No. 27 N. R....	2:20 P. M.
Applied at notice clerk's office for arrival notices.....	2:45 P. M.
Paid charges at cashier's office.....	3:10 P. M.
Started locating freight and loading same.....	3:15 P. M.
Left dock	4:10 P. M.

How many packages—18.

Total time, 1 hour 50 minutes.

THURSDAY, APRIL 2, 1914.

Arrived at Penna. R. R. Sta., Pier 27 N. R.....	11:10 A. M.
Applied at notice clerk's office for arrival notices.....	11:33 A. M.
Paid charges at cashier's office.....	11:42 A. M.
Started locating freight and loading same.....	11:55 A. M.
Left dock'	1:05 P. M.

How many packages—16.

Total time, 1 hour 55 minutes.

FRIDAY, APRIL 3, 1914.

Arrived at Penna. R. R. Sta., Pier 27 N. R.....	12:15 P. M.
Applied at notice clerk's office for arrival notices.....	12:25 P. M.
Paid charges at cashier's office.....	12:35 P. M.
Started locating freight and loading same.....	12:50 P. M.
Left dock	3:05 P. M.

How many packages—20.

General time, 2 hours 50 minutes.

SATURDAY, APRIL 4, 1914.

Arrived at Penna Sta., Pier 27 N. R.....	12:05 P. M.
Applied at notice clerk's office for arrival notices.....	12:15 P. M.
Paid charges at cashier's office.....	12:30 P. M.
Started locating freight and loading same.....	12:35 P. M.
Left dock	1:55 P. M.

How many packages—11.

Total time, 1 hour 40 minutes.

FIG. 36.—A Summary of Truck Performance

2. The carriers compel consignee's representatives to go into their respective terminals and to search for, find, and remove merchandise from under and over piles of freight marked for other consignees.
3. The carriers do not furnish reasonable facilities and suitable and convenient appliances at their respective terminals to enable the shipping public to remove their goods.
4. The carriers frequently pile boxes, bales, and bundles without attention as to whether marks are visible or turned down.
5. The carriers frequently dump merchandise indiscriminately, intermingling in one pile the merchandise of various consignees, piling together inflammable articles and fragile materials with heavy iron pipe and castings, leaving the whole to lie in heterogeneous masses until the consignees' representatives themselves separate the same in their search for goods.
6. The carriers do not maintain sufficient aisles of proper access to merchandise.
7. The carriers do not employ a sufficient number of clerks, weighers, and checkers, to take care of incoming and outgoing freight adequately and to move the same with proper celerity.
8. The carriers permit the trucks of favored team owners to drive onto piers, pass waiting lines of other teams, and there to receive and discharge freight in advance of others.
9. Certain of the carriers discriminate between truckmen, to some of whom they give actual tailboard delivery, while they either wholly or partly deny it to others.
10. The delays at the terminals arising from present terminal conditions for both inbound and outbound are long, serious, and expensive alike for consignors, consignees, carriers, and truckmen.

The foregoing sums up the problems that are encoun-

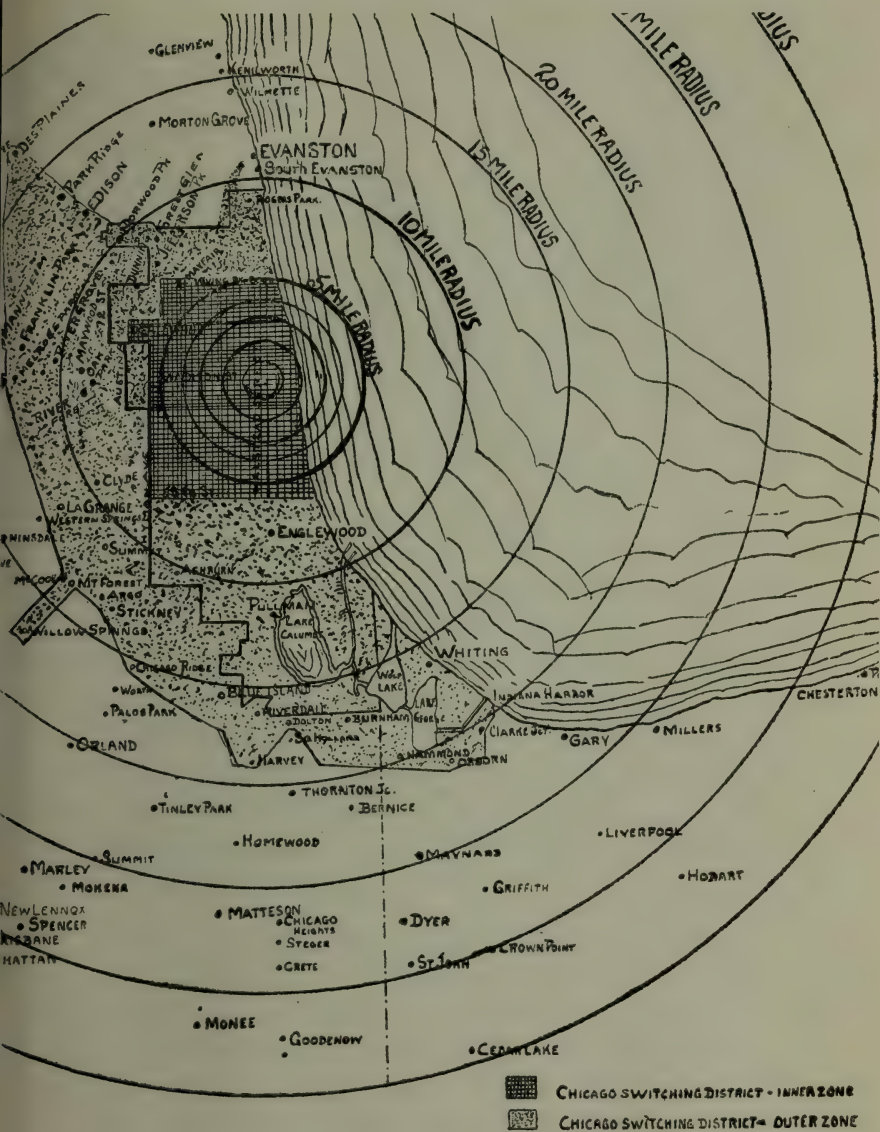
tered in questions of local transport; while many are beyond the control of the industry, the troubles can be minimized, if not entirely eliminated, by placing the superintendent of the service under the control of the traffic manager.

ANALYZING AND CHARTING FACILITIES

The transportation resources of the district should be analyzed to determine (1) available steam routes; (2) electric traction systems; (3) navigable waterways; (4) suburban express wagons or motor truck service; and (5) good highways for motor truck use.

Charts may be prepared similar to the one indicated in Fig. 37, on which are indicated the more important towns and villages within a given radius of the local shipping point. This chart indicates the city of Chicago proper and the so-called "inner and outer Chicago switching district." By this means certain local transportation conditions are most effectively visualized.

In the larger cities and towns, the regular interstate express companies maintain a pick-up and delivery service. In this case, the goods need not be delivered to the express companies' forwarding stations, but should be held in the shipping room awaiting the call of the express companies' wagons or trucks. For small shipments the cost of sending by freight is often greater than that by express. Tho the freight charge may be less than the express charge, the cost of the industry of making the delivery to the freight terminal is frequently greater than the saving, especially on account of the costly waste of time at the freight house. In the case previously mentioned a competent witness testified that the delay of an hour as applied



R. RILEY, 1917

FIG. 37.—A Local Transportation Layout

to a wagon or truck meant an out-of-pocket expense to him of \$1.50, based on a maintenance cost of \$1.00 per hour and an earning capacity of 50 cents per hour. Another point worthy of consideration in this connection is that the express service is more expeditious and is surrounded with greater safeguards than the freight service; as a consequence, only a very substantial difference in favor of the freight charge should warrant sending by freight rather than by express.

This work should be assigned to the routing clerk of the traffic department, who by experience soon becomes able to determine readily which method—freight or express—is more economical.

CHARTING THE CITY

Even more valuable than the general district chart described above is a large scale chart of a few square miles adjacent to the factory or industry, embracing the manufacturing and shipping district of the region. On this are marked the freight receiving and distributing stations, the express stations, factories, and warehouses whence supplies are drawn, and important local customers. A clear picture of this kind makes it easy to route and dispatch trucks intelligently and economically.

A successful plan for delivering and picking up loads involves the use of a large map of the city mounted on a felt or cork backing into which tacks, with heads of different colors, can be easily and firmly pressed. The map is divided into zones, each of which may be served by one truck. The stops or deliveries to be made are indicated for Truck 1 by red tacks, for Truck 2 by blue tacks, for Truck 3 by green tacks, etc.

Conditions will have to be thoroly studied before the boundaries of the zones can be definitely determined. Obviously, a highly developed manufacturing district will require a greater amount of service than residential districts, or those where the manufacturing and shipping centers are scattered.

Likewise, as concerns stops to be made at points adjacent to border lines, if a particular stop can be reached better from the blue route than from the red route, the red tack is pulled out and a blue tack substituted.

ROUTING AND SAVING

The shipping clerk ought to write out each trip of each truck in advance, and the driver should follow the written instructions. Definitely routing the trucks in this manner enables the shipping room to reach the driver at one of his stops with additional instructions if occasion should arise after the truck has left the plant. The shipping room should preserve duplicate copies, and should summarize the work performed by each truck. The form in Fig. 38 shows the essentials of a weekly summary. It is a source of material economy to secure the coöperation of drivers by paying bonuses for an excellent record of trips made, fuel saved, mileage per gallon of gasoline, clear receipts, and tonnage hauled. What may be accomplished in the conservation of equipment and the contingent expense as concerns local transport service is evidenced by the instance cited in connection with Fig. 39.

The day's inbound and outbound tonnage of the industry (A) was distributed as follows:

THE TRAFFIC FIELD

Deliveries to railroad at B.....	700 pounds
Deliveries to railroad at D.....	400 pounds
Deliveries to railroad at I.....	500 pounds
Receipts from railroad at F.....	300 pounds
Receipts from railroad at E.....	400 pounds
Deliveries to local customers at C.....	300 pounds
Receipts from local customers at G.....	200 pounds
Receipts from local customers at H.....	2,000 pounds
Total	4,800 pounds

TRUCK RECORD

Driver _____ Week Ending _____

Car No. _____

	Time of Start	Time of Return	Time Consumed	Running Time	Time of Stop	No. of Stops	Average Time Per stop	Trip Miles	Average Miles Per hour	Gasoline	Oil
	hrs.	hrs.	hrs.	hrs.	hrs.		mins.				
Sun A M											
Sun P M											
Mon A M											
Mon P M											
Tue A M											
Tue P M											
Wed A M											
Wed P M											
Thurs A M											
Thurs P M											
Fri A M											
Fri P M											
Sat A M											
Sat P M											
TOTAL											

Season
hoursSeason
miles

REMARKS

Causes for delays, repairs, etc.

SATURDAY READING

MONDAY READING

WEEK'S RECORD

Week's record derived by subtracting Monday's reading from Saturday's reading.

AVERAGE MILES PER HOUR _____

OIL _____

GASOLINE _____

REPAIRS _____

N. B. Total actual running time, also mileage for week should balance with the week's record, which is the actual time and distance recorded on the instrument during the week.

Fig. 38.—A Truck Record Chart

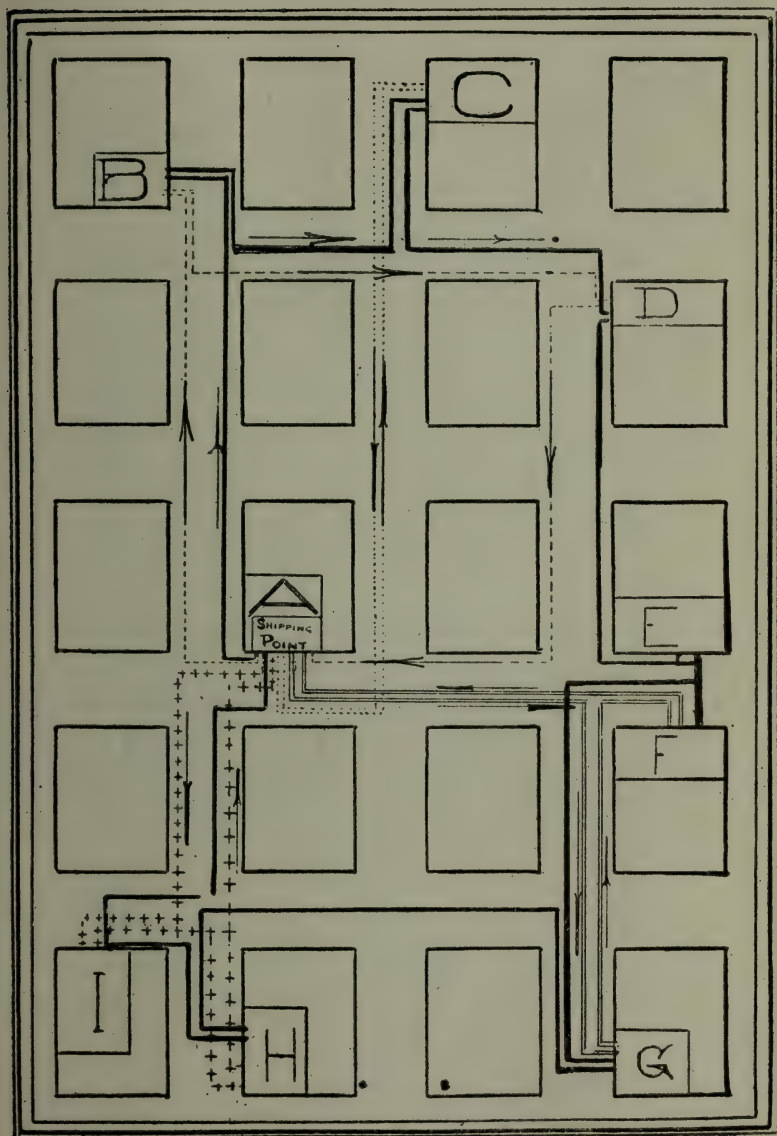


FIG. 39.—A Routing Diagram

To accomplish this delivery four trips were actually made, as indicated by the light lines:

First trip:

Deliver at I.....	500 pounds
Pick up at H.....	2,000 pounds
	<hr/>
	2,500 pounds

Second trip:

Deliver at B.....	700 pounds
Deliver at D.....	400 pounds
	<hr/>
	1,100 pounds

Third trip:

Deliver at C.....	300 pounds
	<hr/>
	300 pounds

Fourth trip:

Pick up at E.....	400 pounds
Pick up at F.....	300 pounds
Pick up at G.....	200 pounds
	<hr/>
	900 pounds

The traffic department prepared a graph similar to that used in Fig. 39, showing that these deliveries could have been made in a single trip as indicated by the heavy black line. The distance would have been reduced almost one half, the time about two thirds. The saving in fuel, depreciation, and other items is evident.

ELASTIC SYSTEM

If a city is blocked off into zones according to the map plan, attention should be paid to zone border points. Sometimes a truck assigned to one zone can make a delivery in an adjoining zone with little or no inconvenience. For example, if the dividing line ran between E and F in Fig. 39, it would probably be best to route both points inside the same zone.

For distant stops it is highly profitable to utilize suburban express agencies rather than to dispatch one of the industrial trucks on a long journey with a light load and no prospect of picking up tonnage on the return trip.

RECEIPTS FOR DAMAGED PACKAGES

Truck drivers should be given a general insight into the laws pertaining to the receipt or delivery of goods from or to common carriers, so they may protect the interests of their employer. The law holds that an employee is the agent of his principal, and that his act binds his principal as completely as if it were performed by the principal himself. Consequently, the assent of the truckman to a provision incorporated in a bill of lading, or to some indorsement on the bill of lading or delivery ticket, is valid and binding on the employer.

The truckman should be cautioned against giving clear receipts for property if the container is crushed or broken; if the contents rattle as if damaged; or if the external appearance indicates leakage. In such cases he should insist on having the package opened while it is still in the railroad company's possession, in order that the extent of the damage may be definitely recorded. The adjustment of the ensuing claim will thus be greatly facilitated.

If the damage is considerable, he should telephone the traffic department for instructions as to the course to pursue. In case the damage has rendered the shipment practically worthless, the consignee is not obliged to receive the property, and he may recover from the carrier its full value.

For open trucks tarpaulins should be provided, so that in wet weather the load can be kept dry. It is customary for railroad companies to indorse receipts "received in the rain," "boxes wet," etc. In case of a claim of damage by moisture, a receipt of this kind accepted by the industry or its representative, raises the presumption that the goods were damaged before they came into the carrier's possession, and as a consequence the carrier is not legally liable for such losses.

LONG-DISTANCE SERVICE

The commercial motor vehicle has enjoyed a wonderful development in the past few years. Many concerns have installed motor truck service to far distant points. As roads become better under the continued advocacy of good road development associations, the commercial motor truck will be far more widely used to collect and distribute shipments for industrial and commercial concerns. A noteworthy achievement in this direction is the motor service maintained by a large tire manufacturer at Akron, Ohio. Finished tires are carried to distributing points in New England, and cotton fabric used in tire construction is brought back from New England textile mills by the truck on the return journey. Many of the leading motor truck concerns have prepared valuable books on the advantages of motor truck service, on maintenance cost, and on the efficient results which may be secured by industries thru the utilization of this type of service.

While the foregoing has laid particular stress on motor transport service, the fact must not be overlooked

that many concerns are still relying on the efforts of man's best friend (the horse); that which is true with respect to motor transports and those reforms which may be inaugurated in connection with such service are likewise applicable in connection with the horse-drawn service.

CHAPTER XIII

RATE AND TARIFF STUDIES

The Relationship of Tariffs and Rates—The Intricacy of Traffic Work—Technical Training a Necessity—Tariffs Are Indispensable—The Use of Maps; The Geographical Plan; The Distance Plan; The Zone Plan; The Route Plan; Advantages—Special Services—The Customer's Convenience—Transfers—Packing Requirements—Classification Survey—Exception Sheets—General Rules—Supplemental Evidence.

THE RELATIONSHIP OF TARIFFS AND RATES

A study of rates or charges for transportation of necessity involves a study of the tariff, since the tariff is the means by which the rate is made public, and the rates so established become a legal obligation on shipper and carrier alike. That is, it may not be set aside and some other rate applied by either party.

Whether the rate is reasonable or unreasonable, it must be applied indiscriminately to all traffic and to all shippers as it is established between given points.

THE INTRICACY OF TRAFFIC WORK

Very few industrial traffic managers give the proper amount of consideration to the adjustment of freight rates applying to the shipping offering of the firm they serve. This is due perhaps to the fact that in the past a great majority of the so-called "industrial traffic managers" have been recruited from railroad

service, and consequently they are inclined to accept as final the rates established by the carrier.

Obviously all ex-railroad men cannot have been employed in the traffic department of the carriers. The great majority of men so recruited have been secured from other divisions, such as the claim department, the accounting department, the operating department, or from the local freight station. Connection with such departments does not afford contact with the many intricate formulas which are employed by carriers in various territories for the establishment of rates. As a consequence, these men are unable to undertake intelligently the management of the traffic department of an industry.

TECHNICAL TRAINING A NECESSITY

The development of the freight-rate structure in this country has proceeded along definite lines. Formulas have been evolved after years of experiment, and group relationships have been established under which many communities have developed and prospered. Until a short time ago these formulas were jealously guarded by the carriers. Only recently the efforts of the LaSalle Extension University have made it possible to put before the shipping public and quasi-industrial traffic managers, representative adjustments thruout the country in consolidated form. The students of this school are therefore intimately acquainted with the controlling features predominating in the various intraregional and interregional rate structures, and in this work they excel, in many cases, the railroad trained traffic manager who has not had the benefit of traffic department training.

TARIFFS ARE INDISPENSABLE

When an industry undertakes traffic work even on a small scale, it must of necessity have at its command a tariff file covering in whole or in part the sources from which it draws its supplies, and the points thruout the country to which it distributes its products.

THE USE OF MAPS

The use of maps is essential in analyzing the contents of a freight-rate schedule. For this purpose, outline maps indicating the North American Continent, the United States, or representative states or sections, can be procured from stationery houses or cartographers.

The outline map can be used to best advantage because it will be necessary to indicate only those points to which or from which the industry ships. The approximate geographical location of such points can be determined from an atlas or from a railroad map. One should be somewhat chary as to the use of railroad maps for geographical locations, however, in that many of these maps are purposely distorted to show to advantage the particular section of the country which a given road might traverse. An authentic atlas is, therefore, to be recommended in preference to a railroad map.

Practically all the public utility commissions of the various states issue maps of steam lines, electric traction systems, and the like, and usually residents of a given state can secure a copy without charge.

Fig. 40 illustrates various uses or plans to which these maps may be adjusted. For convenience, they will be styled the geographical, the distance, the zone, and the route plan.

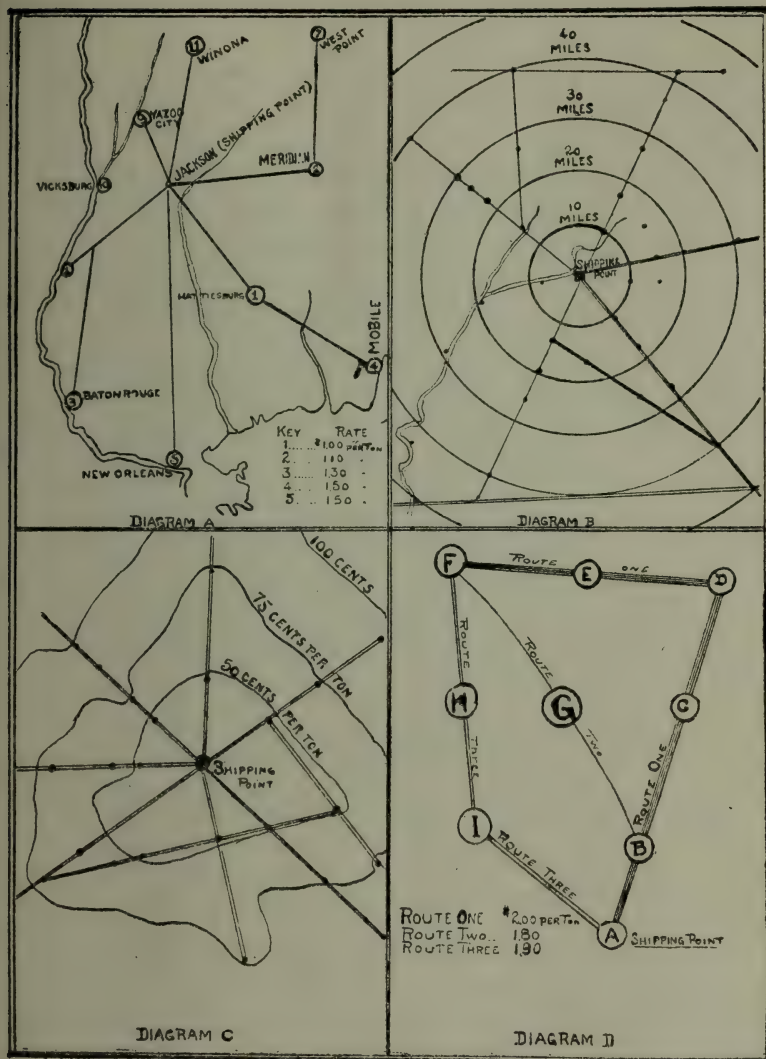


FIG. 40.—Map Plans and Outlines

The Geographical Plan

Under this plan the approximate geographical location of various destinations or sources of supply are indicated with relation to the shipping point.

In Diagram A of Fig. 40, Jackson, Miss., has been selected as the shipping point, and representative points in the vicinity thereof selected. Direct routes are indicated by straight lines, and the actual rate applying from that point on a given class of traffic may be indicated by the use of large circles; or the key reference plan may be used whereby, instead of inserting the rate within the destination or point of origin circle, a single number is inserted as a key, and a corresponding table appearing in connection with the map shows the rate attaching to the different key numbers. In Diagram A, the key number 1 is shown at Hattiesburg, and the table appearing in the right-hand corner indicates that a rate of \$1.00 per ton applies on the commodity considered.

The Distance Plan

Many of the outline maps are drawn to scale. That is, one inch or a fraction of an inch is the equivalent of so many miles, and by the use of a compass adjusted with respect to this scale, a series of concentric circles may be drawn with the shipping point as the center, as in Diagram B of Fig. 40.

The advantage of this plan is that it establishes definitely the relative relationship as concerns the distance of destinations falling within a certain radius of the shipping point. When the rate to these points is inserted in the graph, the rates within a given zone

should bear some relationship to the rates to other points in the same zone, bearing in mind that in the overlap of rate association territories, rates in one association may be on a somewhat higher scale than those in the other associations. As an illustration, the rates from Chicago to the East are on a much lower general basis than the rates from Chicago to the West.

The Zone Plan

Under this plan, a unit cost of distribution is taken as the measure to indicate the respective zones, preferably on a per net ton basis, ranging from fifty cents to five dollars or more per ton. The limit in all directions that transportation can be procured for a given sum is indicated on the map, as illustrated in Diagram C of Fig. 40. A survey will determine first the lowest figure of distribution, and then the next higher unit, etc. The result is often surprising to those who have never employed the plan in their shipping. In many cases, it will be shown that the industry can ship a much greater distance in one direction via a certain route than it can in other directions or via other routes.

The Route Plan

Generally speaking, if the initial line out of a given point is the terminal line at destination, and if it is the short line between such points or not considerably in excess of the distance applying via the combination of lines effecting the short route, the rates via that line will be the lowest between such points.

As illustrated in Diagram D of Fig. 40, a shipper

at A has the alternative choice of three routes in shipping to F. He may, for example, ship via a single line, Route One, via D. He may ship via Route One in connection with Route Two, via B, or he may employ Route Three, via I. A summary of the effective transportation cost via each route, however, might develop that Route Two carried the lowest charge, and other considerations being equal, there should be no reason why he should not patronize the route carrying the lower rate.

Advantages

These charts visualize the existing rate adjustments applied to the traffic so treated, and bring out those inconsistencies which must then be analyzed to determine whether the discrepancy is a discrimination and an unjust and unreasonable rate within the purview of the Act to Regulate Commerce. In the event correspondence with the carriers does not lead to an amicable adjustment of such discriminations, the case should then be brought before the Interstate Commerce Commission for review.

Special Services

The mere fact that in many cases the rate via a given route is less than the rate via some other route is not in and of itself conclusive that this represents the lowest net rate to the industry.

In the case of Diagram D of Fig. 40, it might so happen that the rate from A to F via B would be the least attractive of the three available routes, owing to the fact that on Route One, or on Route Three, a stop-over or some other transit privilege might be in

effect which would offset the advantage of the cheapest rate.

For example, in the case of a steel industry, it might so happen that at I there were facilities for fabricating iron or steel in transit, whereby structural iron or steel could be shipped from A to I to be fabricated and then reshipped to F at the thru rate applying from A to F. Or, in the case of a live-stock shipper, it might be that at I where there is a primary stock market, and that under the reconsigning privileges, he would be allowed to stop his stock at that point to test the market and, if he did not sell, to reship to F.

Thus it will be seen that not only must rates be analyzed, but the special privileges or accessorial services rendered by the carrier on given lines of traffic must also be considered.

THE CUSTOMER'S CONVENIENCE

Quite frequently the initial line, if it be the terminal line at destination, or if, with its connection, it forms a thru route to a given destination, may not be in a position to afford the consignee as advantageous a location for delivery as some lines via which a higher rate might prevail.

The receivers of freight in Chicago might insist on Illinois Central Railroad delivery at some public team track which could not be effected unless the Illinois Central Railroad was given a road haul, or, if effected, it would be at a considerable added expense to the consignee. The expense of switching the car from the initial line to the Illinois Central, if they would accept it at all, would offset any saving which might be made thru the selection of the lower rated route.

In such cases, good judgment must be used in routing the shipment in order to insure to the customer not only the lowest rate but the most convenient delivery.

TRANSFERS

Continuous lines or routes operating thru train service should be selected in preference to those lines or routes wherein numerous transfers are involved. Each transfer multiplies the opportunity for damage to the goods and the likelihood of their reaching the purchaser in an unsatisfactory condition. Such possibilities are not conducive to the best interest of trade development.

PACKING REQUIREMENTS

The packing requirements established in connection with commodity rates and in the case of class rates as affected by interstate and state classifications should be carefully considered in order that they be made uniform, and, if not, the goods so prepared for shipment as to avoid unnecessary delay and added expense in effecting the distribution.

A story is told about a trunk that was shipped via a route over which there was no thru rate applicable, and as a consequence the shipment was governed by three different classifications. The first classification provided that the trunk might be shipped when strapped and sealed, a requirement with which the shipper complied. On arrival at the first junction point, the second carrier required the trunk to be crated before it would forward it. This was done at some expense and

inconvenience to the shipper, whereupon the shipment was forwarded to the junction with the third carrier (the terminal line), who declined to receive it until it was boxed, which necessitated further delay and added expense. Had the packing requirements been uniform, all this expense and delay would have been obviated.

CLASSIFICATION SURVEY

To appreciate the effect of classification packing requirements, it is desirable to tabulate the articles to be shipped by the firm, and to indicate opposite each article the ratings, the packing requirements, and the minimum weight established by the several classifications. Such a tabulation is illustrated in Fig. 41.

On numerous occasions the Interstate Commerce Commission has ruled that the mere difference in the rating assessed on an article in two different classifications does not necessarily prove that the higher rating is unreasonable. In many other cases, however, such differentiation in rating on a given kind of traffic has been condemned. The advantage of the procedure suggested in Fig. 41 is that it brings out these inconsistencies which may then be further analyzed for the purpose of justifying the classification rating as applied to the traffic in question.

Only the interstate classifications have been indicated, namely, the Official Classification, the Southern Classification, and the Western Classification. It might be, for example, that a shipper in Chicago would do considerable shipping under the Illinois classification and the Iowa classification or, in other localities, shippers might be concerned with the intrastate classification of their state or those of adjoining states, in which

CLASSIFICATION SURVEY

ARTICLE	OFFICIAL		SOUTHERN		WESTERN	
	PACKING	RATINGS LCL CL	PACKING	RATINGS LCL CL	PACKING	RATINGS LCL CL
Aeroplanes or Aeroplanes frames	W.D. in boxes or crates Sh or W.D. loose or in packages Wt. 10000 lbs.	D-1	W.D. in boxes or crates Sh or W.D. loose or in packages Wt. 10000 lbs.	D-1	W.D. in boxes or crates Sh or W.D. loose or in packages Wt. 10000 lbs.	D-1
Centre in the rough	barrels or boxes	1	barrels or boxes	1	barrels or boxes	2
Alum. (Sodium Alum.)	barrels. Wt. 40000 lbs.	4	barrels. Wt. 40000 lbs.	4	barrels. Wt. 40000 lbs.	3
Anchors (Ship)	loose or in packages Wt. 36000 lbs.	4	loose or in packages	5	loose or in packages Wt. 36000 lbs.	4
Arado	boxes barrels In packages named Wt. 36000 lbs.	2 2 4	bags boxes barrels	2 1 3	boxes barrels In packages named Wt. 36000 lbs.	1 2 2
Cream of Tartar	In cans or cartons in bolts or barrels In bulk in barrels or boxes In packages named Wt. 30000 lbs.	3 3 4	In cans or cartons in bolts or barrels In bulk in barrels or boxes	1 3	In cans or cartons in bolts or boxes In bulk in barrels or boxes In packages named Wt. 30000 lbs.	2 2 4
Powder, Balling	In glass or earthenware packaged in barrels or boxes Wt. 30000 lbs In fibre or metal cans or cartons in barrels or boxes In bulk in barrels Wt. 30000 lbs	1 3 3 4	In glass or earthenware packaged in barrels or boxes Wt. 30000 lbs In fibre or metal cans or cartons in barrels or wooden boxes In bulk in barrels Wt. 30000 lbs	3 4 3 4	In glass or earthenware packaged in barrels or boxes Wt. 30000 lbs In fibre or metal cans or cartons in barrels or wooden boxes In bulk in barrels Wt. 30000 lbs	4 1 3 4

Fig. 41.—A Classification Survey

instance additional columns should be provided for such classifications.

Another advantage of this plan is that it brings to a focus the requirements of the different classifications as to methods of packing and as to the measure of rates attaching to that style of packing. In the illustration, for example, an aeroplane manufacturer would find that in carloads he would be required to pay, under the Official Classification, the rating of one and one-quarter times first class; under Southern Classification, first class; and under Western Classification, one and one-half times first class.

From such a survey, a manufacturer of baking powder would discover inconsistencies in the ratings on the basic ingredients of baking powder, such as argols, cream of tartar, and even on baking powder itself, altho it would seem that rates on such articles should bear some definite relation to each other.

Taking argols, for example, it is difficult to understand why, when shipped in barrels, the article should take second class in one instance, third class in another instance, and fourth class in still another instance.

Furthermore, argol is a crude form of cream of tartar. It seems manifestly unfair to charge a fourth-class rating on the article when shipped in bulk in barrels, and a third-class rating on the refined product, cream of tartar, as in the case of the Official Classification.

However, as before stated, the mere difference between classifications as to this requirement is not sufficient evidence to condemn a rate without hearing. It is, however, strong presumptive evidence that the requirement is unreasonable, and the industry is thus made aware of the discrepancies which affect its traffic.

EXCEPTION SHEETS

Practically all carriers, either individually or thru rate associations, issue exception sheets to the classifications proper. These exceptions in many cases authorize the application of other ratings and prescribe different methods of preparation for shipment.

It follows, therefore, that the exception sheets should be referred to in determining the classification applicable to the offerings between points, or to or from points, to which the exception sheet applies. The existence of a favorable exception enables the industry to select jobbing centers and to distribute either thru them or thru warehousemen.

GENERAL RULES

The rules incorporated in the tariff proper and the rules appearing in the classification must be analyzed to determine their effect on the traffic of the industry. A concern specializing in the handling of articles of unusual length that require two or more cars for their transportation will find the extra length rules of the classification and of special tariffs of particular interest.

The concern shipping packages of small weight is particularly interested in the minimum charge rules which appear in the classifications and in many of the individual tariffs. The minimum charge is a vital factor in determining whether it is more advantageous to ship by express than by freight.

SUPPLEMENTAL EVIDENCE

Among others, the following important questions have been considered by public commissions charged

with the duty of regulating the transportation charges of common carriers: the advantage of locations possessed by an industry or a community; additional service in the form of equipment; transit privileges and terminal service; back hauls or out-of-line movements; car-mile or train-mile revenue; various elements of competition, such as cost of service, length of haul, and equipment furnished; rates in the opposite direction; rates on manufactured versus crude articles; origin of traffic; previous rates; density of population; public interest; rates via competing carriers; risks by loss or damage; two or three line haul; value of commodity; value of service; volume or bulk of traffic; and weight or bulk of shipment. Many of these topics are touched upon in a treatise on *Grounds of Proof in Rate Cases and Procedure before the Interstate Commerce Commission*, prepared by the LaSalle Extension University, Chicago, Illinois.

The senior rate clerk of the department can be intrusted with the preparation of the detail following tariff and rate studies, and should bring the discrepancies to the attention of the traffic manager. It may then be determined whether the issue is of sufficient importance to the firm to warrant the institution of a formal complaint before a public utility commission, and if so, what factors are to be relied upon to sustain the contention of the industry that the change in rating advocated has merit.

CHAPTER XIV

TRAFFIC GRAPHS, CHARTS, AND MAPS

Purpose and Value of Graphs—Two-Dimension Graphs: Method of Construction—Bar Charts—Supply and Distribution Charts—Circle Charts—Regional Charts—Composite Graphs—Rate Tabulations—Multiplying Copies—Conclusion.

PURPOSE AND VALUE OF GRAPHS

It is the purpose of this chapter to make clear the utility of graphs, and to illustrate the types and the method of construction by a number that have been used in industrial traffic work and in rate cases before the public utility commission. In the preparation of rate exhibits and in the analysis of statistics of traffic work and transportation charges, graphs are well-nigh indispensable. Graphs have been aptly styled "pictures of figures or conditions." Their preparation entails little difficulty or expense, and they enliven formidable arrays of figures.

In this connection an authority has said that long rows of figures must be thoroly studied in order to convert them mentally into quantities which may be compared as to size. This is a tedious task which many executives have learned to dread. The reason is a simple one—a row of figures does not tell a story of itself. A somewhat involved mental process is required to grasp and to visualize the real facts.

TWO-DIMENSION GRAPHS

Since the problems of the traffic department usually involve two factors, such as earnings and time, or distance and elevation, or population and tonnage, graphs may ordinarily be constructed most clearly in two dimensions, vertical and horizontal. In preparing

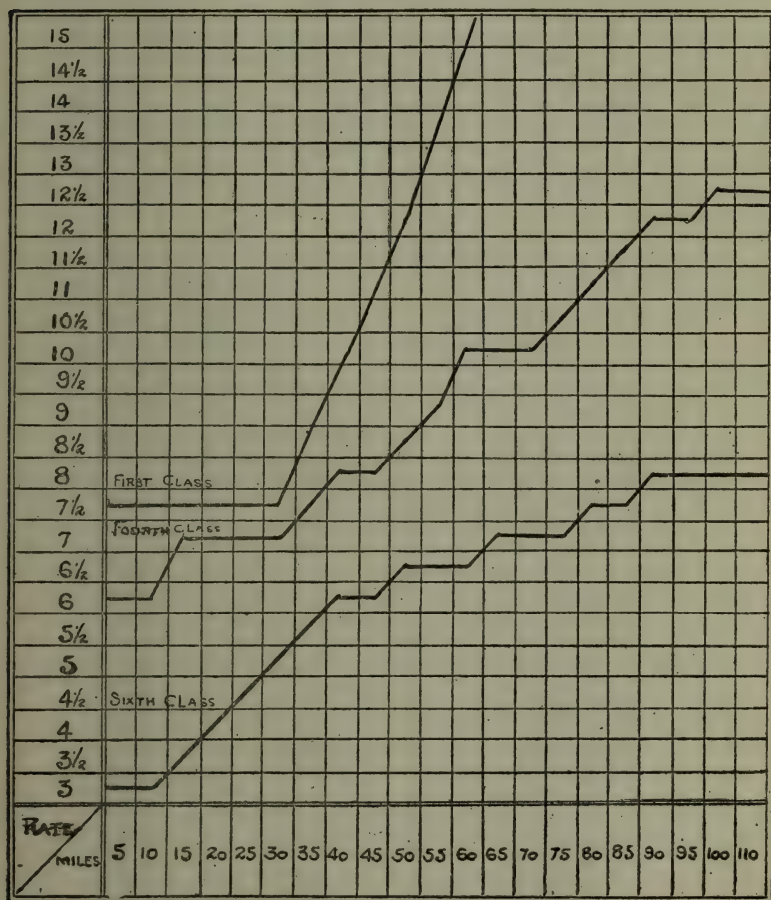


FIG. 42.—A Two-Dimension Graph

graphs of this type, it is necessary to use cross-ruled paper (quadrille ruled); if this cannot be secured from the local stationer, ordinary paper may be so ruled.

Graphs of this type are frequently employed in showing the trend of class rates and the relationship of one class rate to another. They are remarkably advantageous in arguments for rate readjustments. In Fig. 42 the first-class, fourth-class, and sixth-class rates have been charted in the manner contemplated. The numbers on the left-hand side of the graph show the rate in cents per 100 pounds, and the numbers at the bottom show the various distances for which rates are established.

The scale of rates used in preparing this graph is as follows:

MILES	RATES IN CENTS PER 100 POUNDS					
	Classes					
	1	2	3	4	5	6
5.....	7½	7½	7	6	4	3
10.....	7½	7½	7	6	4½	3
20.....	7½	7½	7½	7	5	4
25.....	7½	7½	7½	7	5½	4½
30.....	7½	7½	7½	7	6	5
40.....	9½	9½	9	8	7	6
45.....	10½	10½	10	8	7½	6
50.....	12	11½	10½	8½	7½	6½
55.....	13	12½	11½	9	7½	6½
60.....	14½	13	12	10	7½	6½
65.....	15½	14	13	10	7½	7
70.....	17	15	13½	10	8	7
75.....	18	16	15	10½	8	7
80.....	19½	18½	17	11	8½	7½
85.....	21	19	17	11½	8½	7½
90.....	22	20	17	12	9	8
95.....	23	22	18	12	9	8
100.....	24	22	19	12½	9	8
110.....	24½	22	19½	12½	9	8

The advantage of the graph plan in this instance is that it shows an obvious inconsistency by pictorially contrasting the rate of one class with that of another. In all properly adjusted scales of rates there should be a definite relationship between the rates of the lower classes and those of the first class, or whatever rate is chosen as the basis.

Method of Construction

The four steps necessary in constructing a two-dimension graph are indicated in Fig. 43. In determining the lines, or curves, as they are commonly called,

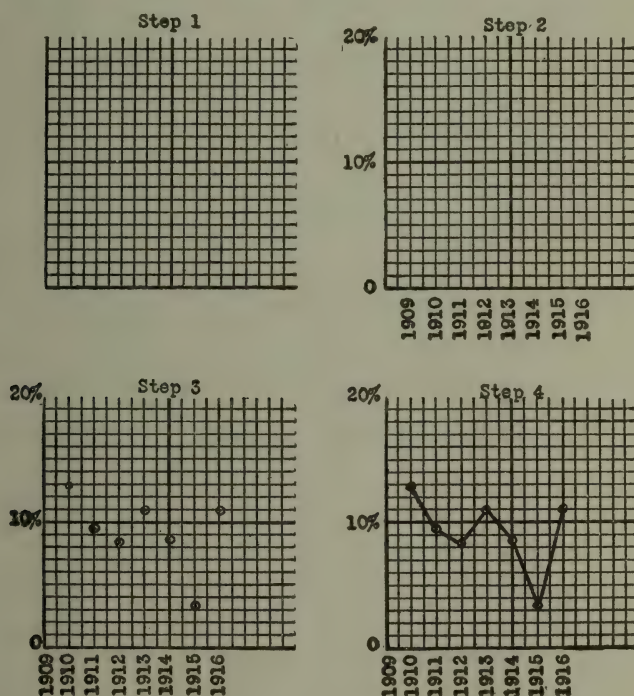


FIG. 43.—The Four Steps of Charting

dots may be inserted first in the proper square; when all the dots indicating the rates have been definitely indicated, they may be connected with lines, as in the figure.

Fig. 44 indicates a chart which was prepared as an exhibit in the case of the Atlas Portland Cement Company v. the Boston & Maine Railroad, comparing the present cement rates on the Boston & Maine with cement rates on the New York Central and on the Delaware & Hudson, and with the constructive rates on the basis of minimum shipments of 50,000 and 72,000 pounds, respectively.

The horizontal and vertical line method may also be used to indicate the topography of a given section of the country, or the elevation of various points in and near a city, as shown in Fig. 45. Here the marginal numbers represent the elevation in feet, while the figures at the top represent the distance of the destinations from the starting point.

BAR CHARTS

In a bar chart, the full length of the bar or block represents 100 per cent, and the various elements which go to make up the total are indicated by subdivisions of the bar.

If it is desired to depict the inbound and outbound tonnage of an industrial shipping concern, and if the figures obtainable indicate that the ratio is 45 per cent inbound and 55 per cent outbound, on a bar chart this would be indicated as shown in Fig. 46. If it were desired to distinguish between different classes of traffic, say, for example, between carloads and less

CEMENT RATES ON D. & H. AND N. Y. C.
COMPARED WITH PRESENT AND CONSTRUCTIVE B. & M. RATES
CENTS PER 100 POUNDS

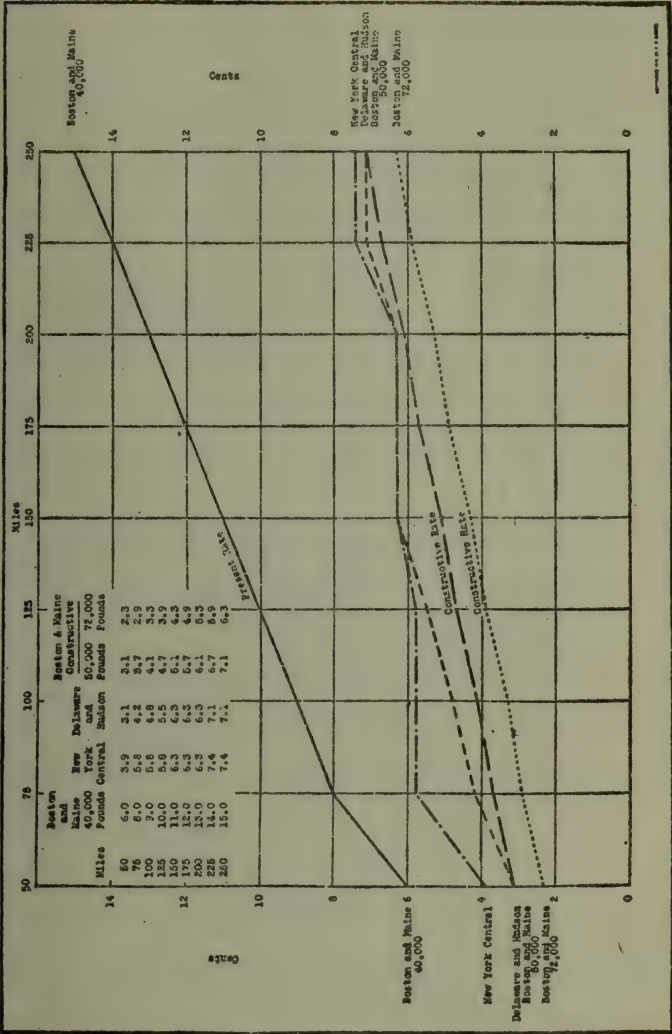


Fig. 44.—A Composite Two-Dimension Graph

than carloads, the graph could be so modified as to include this information, as illustrated in Fig. 47.

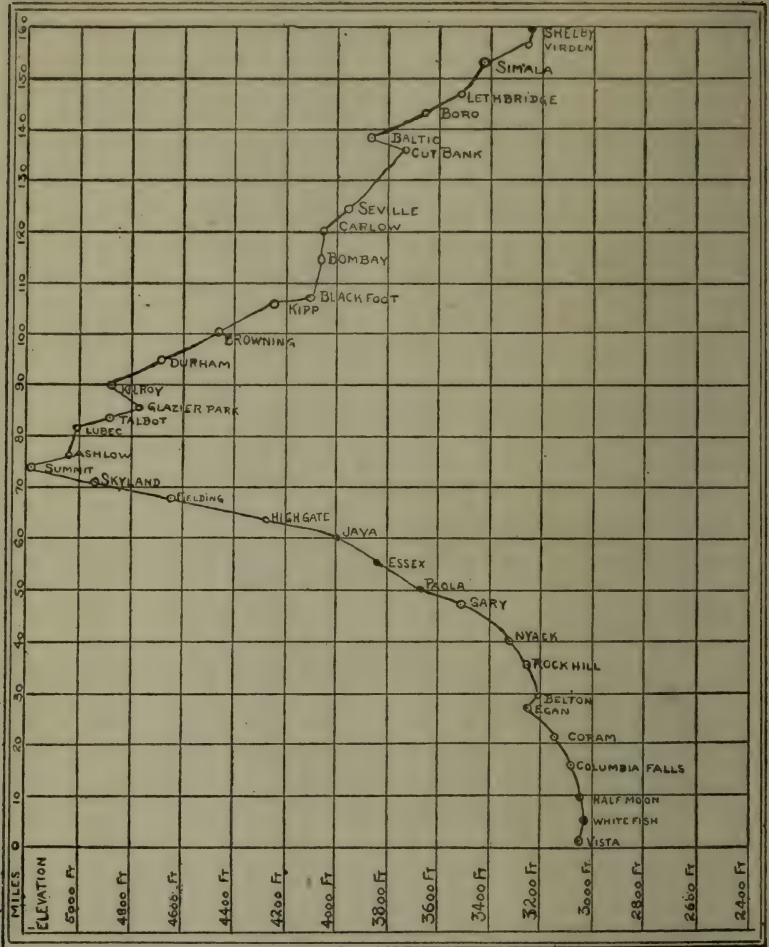


FIG. 45.—A Two-Dimension Graph Applied to Topography

The bar or block chart is sometimes used in making a comparison between one commodity and another.

Thus the distances such commodities may be transported for given sums are shown in Fig. 48.

Perhaps this type of chart is employed most effectively to compare period performances with respect to tonnage. Fig. 49 is a chart used for this purpose. The numbers at the top of the sheet are those of the tons handled. At the end of each month a block is inserted showing the amount of work done, and, if desired, dotted lines or bright spaces may be utilized,

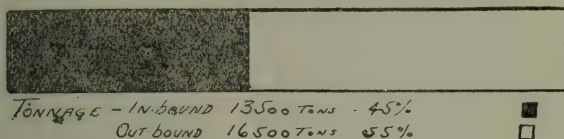


FIG. 46.—A Bar Chart

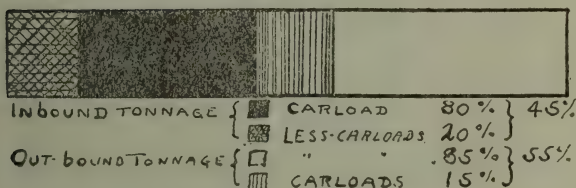


FIG. 47.—A Composite Bar Chart

as shown, to indicate the preceding year's performance for the same period.

SUPPLY AND DISTRIBUTION CHARTS

Supply and distribution charts are useful in making plans for the growth or readjustment of a concern's shipping activities. Sometimes they are used to picture how the traffic resources of a region correspond to production and consumption. Fig. 50 is a chart of

DISTANCES CEMENT AND OTHER HEAVY COMMODITIES ARE CARRIED FOR A RATE OF 5 CENTS PER 100 POUNDS

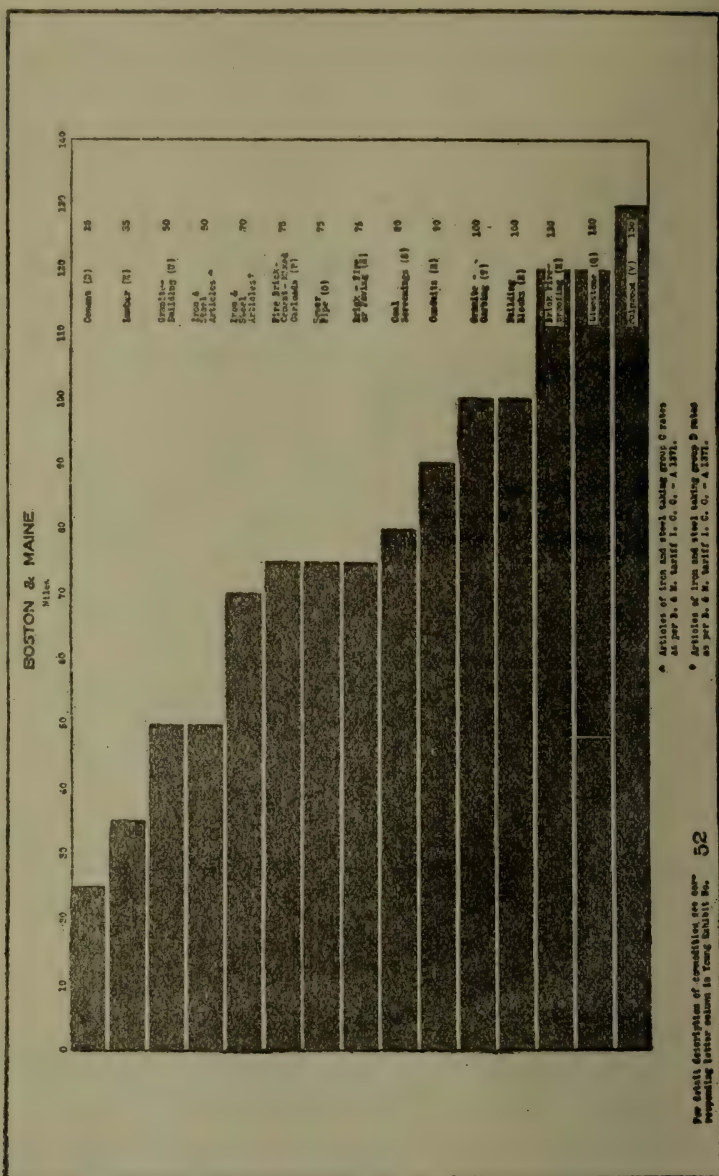


FIG. 48.—A Multiple Bar Chart

the cotton production of the state of Mississippi. The various counties of the state are blocked in solid or

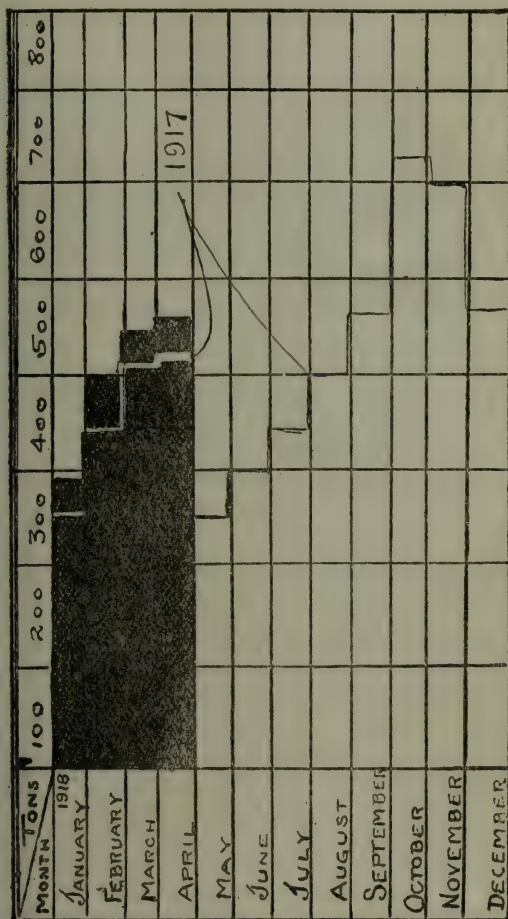


FIG. 49.—A Comparative Bar Chart

are covered with lattice work lines of various kinds, and a key indicates the meaning of the arrangement as applied to production.

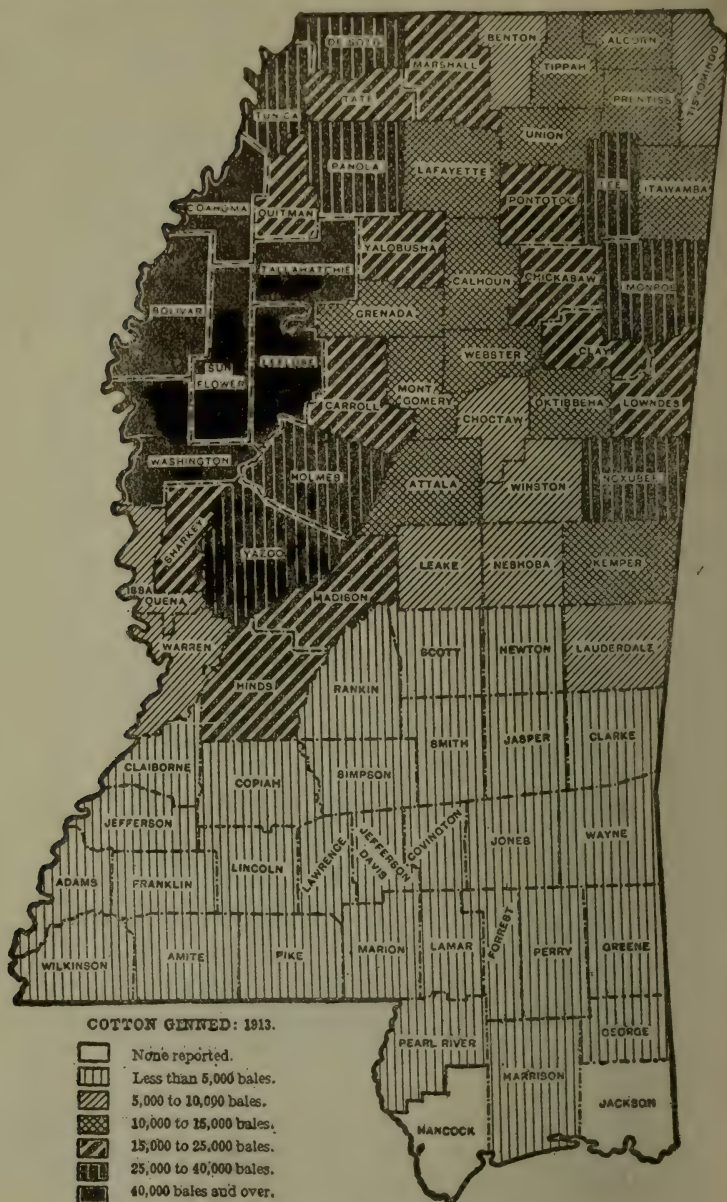


Fig. 50.—A Zone Production Chart

CIRCLE CHARTS

Circle charts are quite frequently used by common carriers in showing the sources of revenue and the distribution of expense. They can be employed with equal advantage in industries to show the same factors. Suggested methods of employment are indicated in Fig. 51.

Diagram A of Fig. 51 indicates the distribution of moneys paid out for transportation among the several agencies employed by an industry.

Diagram B indicates the apportionment of tonnage among representative lines serving an industry. On competitive business it is customary to apportion the traffic impartially among the lines unless the service or the rates of one line attract a preponderance of tonnage.

To determine the apportionment of labor, the circle chart may also be employed, as illustrated in Diagram C. Here the work of the claim division of an industry has been charted, indicating a preponderance of claims for overcharge as contrasted with those for damage or for total loss.

In Diagram D, the expense of operating the department has been charted in a circle graph.

The relationship of expense to recovery of claims is frequently indicated by means of circle graphs, as indicated in Fig. 52. The outer circle represents the amount recovered by a certain traffic department, and the inner circle indicates the expense incurred in maintaining the department.

Fig. 53 indicates the adaptation of the circle graph to railway operation. This form may be employed in industrial traffic work in lieu of the diagrams shown in Fig. 51.

REGIONAL CHARTS

In analyzing the contents of tariffs, especially those applying on specific commodities, it frequently becomes necessary to transfer the various rate adjustments con-

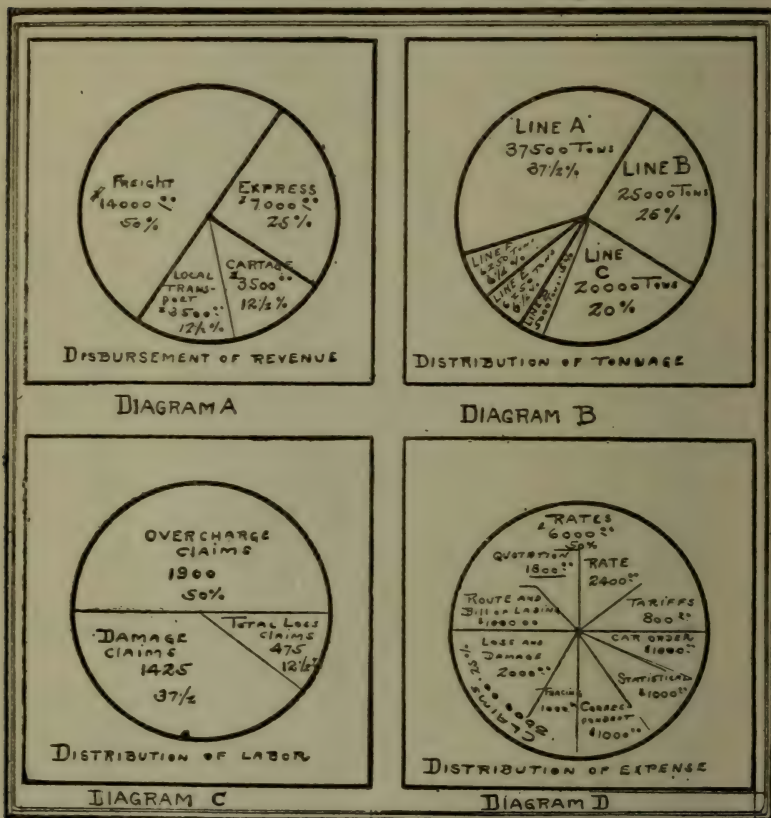


Fig. 51.—Circle Charts

tained therein to a map of the territory covered by the publication.

Fig. 54 is reproduced from an exhibit filed in a case involving rates on lumber from points in southeastern

Missouri and northeastern Arkansas points to various destinations.



FIG. 52.—A Comparative Circle Chart

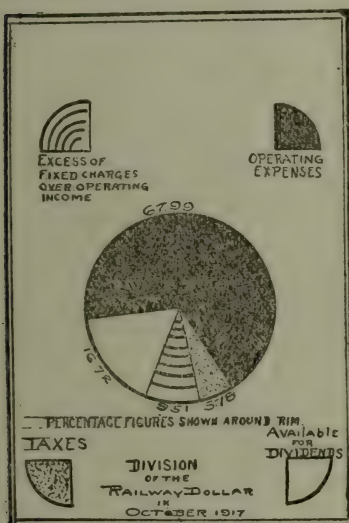


FIG. 53.—A Composite Circle Chart

In this chart the railroad lines serving the territory have been mapped, and the territory has been blocked off into zones determined by the rates that apply from



Fig. 54.—A Regional Chart

given stations. The stations immediately south of Cape Girardeau are in a 13-cent zone. Southeast of that is a 14-cent zone, and southeast of the latter a 15-cent zone. This plan enables industries to determine readily the layout of the tariff and its effect on

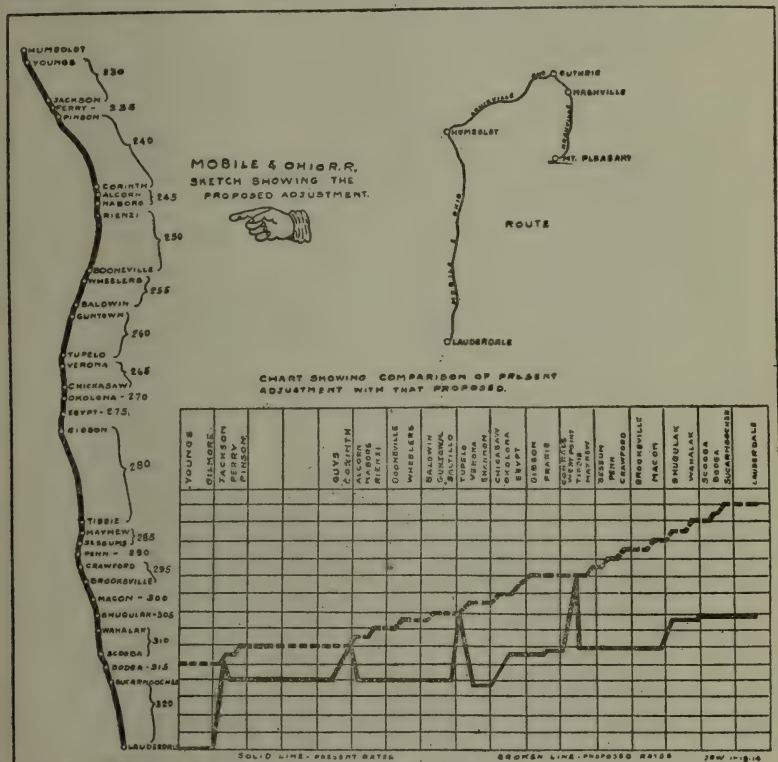


Fig. 55.—A Combination Graph

the tonnage of the class under consideration from a given district.

COMPOSITE GRAPHS

Fig. 55 illustrates the composite type of graph, wherein the territory is depicted by a map and the

CHERRY EXHIBIT 9, CORRECTED.—STATEMENT SHOWING
RATES IN CENTS PER 100 POUNDS ON CEMENT,
CARLOADS, FOR DISTANCES STATED

	ILLINOIS				IOWA	
	Intra- state	Inter- state	C.F.A. Scale	Lorenz Scale (I)	One Line Haul (Col.) ("A")	Joint Haul (Col.) ("B")
Miles	Rate	Rate	Rate	Rate		
5.....	3.2	3.4	2.6	3	3.3	5.5
10.....	3.7	3.9	2.6	3.2	3.4	5.5
40.....	5	5.3	4.5	4.2	4.2	5.9
60.....	5.8	6.1	5.3	4.7	4.8	6.4
80.....	6.4	6.7	5.8	5.2	5.3	6.7
100.....	7	7.4	6.3	5.6	5.8	7.2
120.....	7.6	8	6.3	6.1	6.2	7.7
140.....	8.2	8.6	6.3	6.5	6.6	8.2
160.....	8.6	9.1	6.8	6.8	7	8.5
180.....	9	9.5	6.8	7.2	7.4	9
200.....	9.4	9.9	7.4	7.5	7.8	9.3
220.....	9.7	10.2	7.9	7.8	8.2	9.6
240.....	10.1	10.6	7.9	8.1	8.6	9.9
250.....	10.3	10.8	7.9	8.2	8.8	10
275.....	10.7	11.2	8.4	8.7	9.4	10.5
300.....	11	11.6	8.9	8.9	9.8	10.9
325.....	11.6	12.2	9.5	9.3	10.4	11.3
350.....	11.9	12.5	10	9.6	10.8	11.7
375.....	12.2	12.8	10.5	9.9	11.3	12.1
400.....	12.5	13.1	11.2	10.2	11.7	12.5
425.....	13.1	13.8	11.2	10.6	....	....
450.....	13.4	14.1	11.6	10.9	....	....
475.....	13.8	14.5	11.6	11.2	....	....
500.....	14.1	14.8	11.6	11.5	....	....

FIG. 56.—A Rate Tabulation

corresponding rate adjustment, present and proposed, is appended in a two-dimension graph. This graph was used in a rate case between the Mt. Pleasant Fertilizer Company and the New Orleans & North-eastern Railroad Company et al.

RATE TABULATIONS

Sometimes the rate adjustment does not readily lend itself to charting by the graph method, and it is necessary to resort to tabulations indicating the rate on like commodities from the same shipping point, as in Fig. 56, or on the same commodity in different localities, according to the regional rate adjustment that may obtain therein, as indicated in Fig. 57.

MULTIPLYING COPIES

Quite frequently, especially in rate cases, numerous copies of the exhibits introduced must be prepared for the use of the parties interested in the proceeding. Copies must be furnished to the commission, the examiner, the opposing counsel, and far associated witnesses. As a consequence, in the preparation of these charts consideration must be given to the methods to be used in making the copies.

From an original black and white sketch, zinc plates may be obtained by a photographic process; the needed copies can then be printed. Or the original may be drawn on tracing cloth or paper, and blue or black prints can be made from the original. Or the graph may be photographed in the usual way, and prints can be made from the negative. Fig. 58 represents an exhibit that was made in the last manner.

STATEMENT SHOWING COMPARISON OF RATES ON LUMBER AND COMPOUND WOOD FROM AND TO CONSUMING POINTS.

TO—	Memphis, Tenn.				Cedars, Miss.				Louisville, Ky.				Goshen, Ind.				Wausau, Wis.				Grand Rapids, Mich.				St. Louis, Mo.			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Chicago, Ill.	17.5	16.5	20.5	4	21.5	20.5	27.5	7.5	11.5	16.8	5.1	8.4	9.5	1.1	10	11	1	9.5	12.6	3.1	8.5	9.5	1					
Kankakee, Ill.	17.5	16.5	20.5	4	21.5	20.5	27.5	7.5	11.5	16.8	5.1	8.4	9.5	1.1	15	16	1	9.5	12.6	3.1	8.5	9.5	1					
Naperville, Ill.	17.5	16.5	20.5	4	21.5	20.5	27.5	7.5	12.6	17.3	4.7	11.6	14.2	2.6	42	13	1	12.6	15.8	3.2	8.5	9.5	1					
Richmond, Ind.	18.6	18.4	26.9	8.5	22.4	22.4	29.4	7	8.4	12	3.6	10	12.1	2.1	19.5	24.7	5.2	12.1	15.2	3.1	9.5	15.8	6.3					
Andrews, Ind.	19.6	19.6	27.8	8.2	24.5	23.6	30.8	7.3	10.5	14.1	3.6	7.4	8.4	1.1	18.5	23.7	2.5	10.5	13.1	2.6	10.5	15.8	6.3					
Elkhart, Ind.	19.6	19.6	28.3	8.7	25.5	23.6	33.3	9.1	11.5	16.8	5.1	3	4.5	1.5	18.5	20.5	2	8.4	10	1.6	10.5	16.3	5.8					
Shelbyville, Ind.	17.5	17.5	25.5	8	22.4	21.5	28.5	7	8.4	10.5	2.1	11	13.7	2.7	19.5	24.7	5.2	13.7	16.8	3.1	8.5	14.7	6.2					
Peru, Ind.	18.6	18.6	27.3	8.7	24.5	22.6	30.6	8	10.5	14.1	3.6	8.4	10.1	1.7	15.9	23.6	7.7	0	0	0	12.6	18.9	6.3					
Grand Rapids, Mich.	21.7	21.7	31	9.3	27.6	25.7	36	10.3	13.5	16.8	5.3	6.3	8.4	2.1	18.5	22	3.5	7.4	9.5	2.1	12.6	18.9	6.3					
Sturgis, Mich.	21.7	21.7	31	9.5	26.5	25.5	34.8	9.3	11.5	16.8	5.3	6.3	8.4	2.1	18.5	22	3.5	7.4	9.5	2.1	12.6	18.9	6.3					
Menominee, Mich.	25.1	25.1	26.1	1	31.1	29.1	35.1	6	19.1	20.1	1	15.8	18.4	2.6	9.5	10.5	1	10.5	13.7	2.6	16.1	17.1	1					
Detroit, Mich.	21.7	21.7	31	9.3	26.6	25.7	36	10.3	12.6	18.3	5.7	9.5	11.6	2.1	19.5	34.7	5.2	9.5	11.6	2.1	12.6	18.9	6.3					
Two Rivers, Wis.	23.5	23.5	24.5	1	29.5	27.5	33.5	6	17.5	18.5	1	13.7	16.3	2.6	8.5	9.5	1	10	12.6	2.6	14.5	15.5	1					
Average differentials..	6.5				7.9				3.9				1.9				3.1				2.7							

EXPLANATION AND TARIFF AUTHORITIES.

A—Lumber except cottonwood and gum.

B—Cottonwood and gum lumber.

C—Compound wood.

D—Differentials over lumber.

E—Lumber all kinds.

Agent Anderson's I. C. C. No. 18.	Pere Marquette I. C. C. No. 3445.
Agent Anderson's I. C. C. No. 15.	Pere Marquette I. C. C. No. 3472.
Agent Morris' I. C. C. No. 490.	Pere Marquette I. C. C. No. 3457.
Agent Morris' I. C. C. No. 571.	Pere Marquette I. C. C. No. 3778.
Agent Morris' I. C. C. No. 562.	Pere Marquette I. C. C. No. 3460.
Agent Morris' I. C. C. No. 942.	Pere Marquette I. C. C. No. 3813.
Agent Washburn's I. C. C. No. 138.	Chicago, Ind. & Louisville I. C. C. No. 3157.
Agent Cameron's I. C. C. No. D 80.	Illinois Central I. C. C. No. 5187.
Agent Boyd's I. C. C. No. A-276.	Illinois Central I. C. C. No. 3996.
Agent Boyd's I. C. C. No. A-638.	C. C. & St. L. I. C. C. No. 6449.
Agent Boyd's I. C. C. No. 608.	C. C. & St. L. I. C. C. No. 8447.
Agent Boyd's I. C. C. No. A-616.	Chicago & Northwestern I. C. C. No. 7460.
Agent Fulton's I. C. C. No. A-124.	New York Central I. C. C. No. A-45.
Pere Marquette I. C. C. No. 571.	New York Central I. C. C. No. A-3209.
Pere Marquette I. C. C. No. 3493.	New York Central I. C. C. No. A-3228.
	Pennsylvania Co. I. C. C. No. F-600.

Fig. 57.—A Rate Comparison

CONCLUSION

We have discussed and depicted in this chapter the representative forms of graphs, charts, and maps which may be employed in the development of the efficiency of the traffic department, especially as an aid to the intelligent prosecution of rate cases. Each form has its particular merits, and it is hoped that the suggestions herein contained will be of benefit to the reader. Certainly the chart method is much more efficacious than unillustrated, spoken, or written language, and the Commission has frequently expressed its appreciation of illustrative exhibits of this kind. Moreover, their use tends to develop those analytical qualities which are so essential in the successful traffic man.

CHAPTER XV

FOREIGN DEPARTMENT

Development of Foreign Trade—Export Manager—Rate Quotations—Formalities in Making Shipments—Packing—Notifications of Shipments—Invoices—Lighterage—Cartage—Warehousing—Shipping Permits—Dock Receipts—Manifests—Consular Invoices—Bills of Lading—Library.

DEVELOPMENT OF FOREIGN TRADE

The European war gave the United States an unprecedented opportunity to secure a full share of the world's foreign trade. It remains to be seen, however, what percentage of the business so secured will be permanently retained by American merchants and manufacturers or whether it will revert to those nations from which it was taken.

The recognized methods for the development of foreign trade are: (1) native (local) merchants or jobbing houses; (2) resident commission agents; (3) traveling salesmen; (4) branch houses or depots. The retention of the trade so developed, however, depends largely on the manner in which the orders are executed, and especially upon the observance of the customers' wishes as to packing, routing, and forwarding. Since these are primarily questions of transportation, they fall within the province of the traffic department.

The details surrounding foreign shipping are highly complicated, especially the many formalities which have to be observed at the port of entry or transshipment. In order that every necessary provision may be made before a consignment leaves this country, many concerns which are not located in a seaport frequently find it desirable to employ the services of an export agent to attend to these for their account. In some cases, the navigation companies attend to these formalities for the account of the owner, either free or for a nominal charge. Lack of uniformity in this regard, however, is confusing, and if the services of an agent are required in some cases, he may as well be given charge of all shipments of this character.

EXPORT MANAGER

If an industry is located in the interior and the majority of its foreign trade moves via a certain port, New York, for example, it may be desirable for the firm to open its own foreign office at New York. The head of this office is then responsible for the observance of every formality required in connection with both exports and imports.

New York is the most logical location for an export office in America, not only because it is the greatest port, but also because most of the foreign buyers reach the country by way of New York; if not, they soon go there and spend most of their time, attracted by the shops, the amusements, and the presence of factories and sales agencies. A splendid combination for a port representative in New York, therefore, is a combination salesman-traffic man.

Where, however, for any reason a firm does not have

a foreign office in a seaport, the foreign shipping matters are handled at the home office, and all details concerning foreign shipping should be in charge of the traffic department.

RATE QUOTATIONS

The novice in ocean shipping matters will be somewhat surprised to find that very few boat lines have fixed or permanent rates to which they adhere from voyage to voyage. On the contrary, even in normal times, to say nothing of times of war, the charges fluctuate from voyage to voyage, and it is, therefore, difficult to forecast in advance of the time of shipment the exact charge for transportation to foreign customers.

Requests will be received from various sources asking for "C.I.F." (cost, insurance, and freight); "F.A. S." (free alongside); "F. O. B. (free on board); or "F.O.B. destination," "F.O.B. factory," or "F.O.B. warehouse." The most careful attention must be paid to these terms in making the quotation, since each one involves a different degree of liability and obligation.

Under a "C.I.F." quotation, for example, the seller agrees to furnish the goods (cost); to insure them (insurance); and to pay freight (freight) both inland and ocean; and the seller's obligation is terminated when this is done.

Under the terms of an "F.O.B. destination" sale, the seller agrees to deliver the goods at destination free of all charge; and if the goods should be lost at sea, the seller could not recover of the buyer, since he has not made delivery according to his contract.

These quotations, when transmitted to the customer,

are frequently compared with similar quotations from competing concerns in this country. It is, therefore, important that they be clearly phrased and absolutely accurate; ambiguity or error results in loss of money or of business by the firm.

FORMALITIES IN MAKING SHIPMENTS

The numerous formalities which must be observed in connection with foreign shipments are bewildering to the layman. Their complexity is responsible, at least in part, for the disinclination on the part of some American concerns to enter foreign trade.

PACKING

In filling an order from a foreign customer, the first step is to prepare it for shipment *exactly as he directs*; or, if no directions are given, to prepare it so as to entail the least possible expense compatible with the safety of the goods. Reference has previously been made to the fact that ocean freight rates are computed on either a weight or a measurement basis, whichever is greater, at ship's option; and the customer, consequently, is not pleased if he has to pay the freight on a consignment put up in a container two or three times as large as necessary. Substantial reinforced containers must be employed to withstand the unusual stresses to which the package may be subjected, and where the actual packing has been delegated to a subordinate, packages should be carefully inspected by the superintendent of the shipping room to make certain that this detail will prove satisfactory to the customer.

NOTIFICATION OF SHIPMENTS

In the case of shipments from inland points of origin, the seaboard representative, whether he be a representative of the firm, an accredited export agent, or the foreign freight agent of a steamship company or navigation line, should be notified of the forwarding of the shipment. This may be accomplished by sending him the original bill of lading, by means of which the goods may be secured from the railroad by local truckmen, or lightermen where lighterage is necessary.

Inland freight charges should be prepaid, thus eliminating objectionable red tape at the seaboard.

INVOICES

An invoice should be sent with the bill of lading, since the selling price of the goods must be declared in the manifest according to the customs regulations of this country.

LIGHTERAGE

This is an important element in figuring ocean charges. Lighterage is the delivery of property from railroad piers to the navigation company's piers or docks by barges, and the charge therefor. At various harbors, New York, for example, the inland transportation companies furnish free lighterage within certain limits. That is, on some classes of goods they assume the cost of effecting the transfer from their terminals to those of the navigation company. Free lighterage does not apply, however, to heavy cargo or to articles of unusual dimensions. A charge is made for the use of special equipment, such as steam light-

ers or derricks or hoists, which are necessary to swing heavy articles from piers or on board the vessel, especially if the equipment of the vessel is unable to do so.

CARTAGE

Where the transfer is not effected by car floats or by lighter from dock to dock, it must be done by cartage. In some cases this must be added to the rate. The terminal tariffs of the inland transportation companies should, therefore, be analyzed carefully to determine the bearing of such cartage and lighterage regulations as may be incorporated therein.

Cartage and lighterage are particularly important in the case of heavy articles, where the cost may assume considerable proportions. Instances are on record where shipping novices have assumed that the rate for transportation was made up of the inland rate plus the steamship rate, and have completely failed to take into account the extraordinary terminal cost; as a result their principals have suffered a substantial loss which would not have occurred had the transportation problem been intelligently analyzed.

WAREHOUSING

Sometimes, because of directions from the customer, or for other reasons, it is necessary or desirable for the industry to ship goods to a port and to warehouse them at that point, pending the receipt of other goods with which they are to be assembled, or until sufficient cargo space is available on a vessel sailing at a later date. The many warehouses at the waterfront of our principal seaboard cities will receive goods for-

warded to them, and will hold them until the proper time, at a nominal charge for storage and for handling.

SHIPPING PERMITS

Unlike railroad companies or inland navigation companies, transoceanic or coastwise shipping concerns do not permit the promiscuous delivery of freight at their piers. Obviously, a vessel can carry only so much tonnage on a weight or measurement basis. The agent of a steamship company, therefore, must book freight offerings for various vessels according to a definite plan. He must not permit his piers to become congested. His freight must arrive on a schedule, and after he has agreed to accept his capacity cargo, he must receive no more.

After the goods have reached the seaboard and are ready for forwarding, the shipper must, therefore, request a shipping permit. A description of the goods, the quantity, the number of packages, and the weight and measurement are usually required to be shown on the request for such permits. If the space is available, the provisions of the shipping receipt should be carefully observed. This may provide that the goods are to be delivered on a certain day or at a certain location, and the tendering of the goods at any other time or at any other location will result in their being refused.

Some bills of lading and contracts provide further that the freight is earned whether the goods are carried or not, and where the vessel sets aside the space allotment and the shipper does not get the goods aboard that ship, he is charged for the space as tho the goods were carried.

DOCK RECEIPTS

In exchange for the shipping permit the truckman will be given a dock receipt by the dock foreman, indicating the number of packages received, and the measurement, weight, and similar items. Care should be taken to see that the dock receipt specifies the number of packages, their marks, and similar information, as in the majority of cases this receipt is to be later exchanged for a bill of lading.

MANIFESTS

The customs regulations require the preparation of a manifest, the form of which is prescribed. This must be filled out in accordance with the directions. A supply of these blanks can be kept in the foreign department, so that copies can be sent to the customs house to be attested or viséd and a certified copy can be obtained to accompany the other shipping documents.

CONSULAR INVOICES

In the case of goods destined to a relatively small number of countries, consular invoices are required. To a certain extent they are a duplication of the information in the manifest, containing a statement of the kind of goods, their value, the exporter, the consignee, the vessel in which shipped, marks, and other data.

These invoices are presented to the consuls of the respective countries at the port of shipment, and are certified by them, a charge being levied for this service ranging from 25 cents to \$25, according to the value of the shipment and the country involved.

BILLS OF LADING

Bills of lading for foreign shipments must conform to rules that differ materially from those applying to domestic rail shipments. There is no uniform bill of lading for foreign shipment. Various forms are in use by the different lines flying flags of various nations. A different form may be required in the case of a sailing vessel than in the case of a steam vessel. The provisions of a bill of lading covering a shipment to Australia by way of the Cape of Good Hope may vary widely from one covering a shipment to the same point by way of Panama.

Moreover, many more copies are required than in the case of domestic transportation. It is customary to issue foreign bills of lading in sets of six or more, with two or more negotiable copies; these negotiable copies are indorsed to the effect that when one or the other has been filed, the other is null and void. The additional copies are required by the carrier, the consular representatives of certain nations and the shipper or his representative.

Not infrequently, especially in times of warfare, bills of lading covering the same shipment are sent by a vessel other than the one on which the cargo is carried, especially where a slow boat has been employed as the carrier. This gives the consignee's representative advance notification of the shipment. Several vessels are sometimes employed, so that if one is lost, the document may be received via another steamer.

After it is ascertained how many copies are required, the bill of lading should be prepared from the dock receipts, particular attention being given to indicating the style of package, the number of pieces, the

weight and measurement, and the marks of identification.

When the bill of lading has been made up, the dock receipt, the customs house clearance, and the consular invoice should be taken to the navigation company for signature and indorsement. At this time the total weight or measurement is inserted on the face of the bill of lading, the charges are computed, and payment is made, according to the prevailing practice of ocean carriers of demanding prepayment of all freight.

MARINE INSURANCE

All export shipments should be covered by marine insurance, without exception, with a good company or particularly a firm that has a good broker. War risk should be covered. Ordinary marine insurance does not cover war risk. It has been found advisable, according to some shippers, at least to have one broker to handle both the marine and the war risk and if possible one insurance company to handle both. For example, in a case of a heavy loss suffered by a shipper, the marine company told him it was a war-risk loss, and the war-risk underwriter stated that it was a marine risk. There was considerable going back and forth before settlement was accomplished. Therefore, it is advisable, if possible, to have one company cover both.

LIBRARY

A competent export manager must not only keep up with shipping news and read the principal trade papers and periodicals of the chief cities of the world, but he should have a good office reference library on his

specialty. The following twenty publications should be on his desk for daily reference. This list can be supplemented from time to time by the addition of authoritative works, foreign dictionaries, maps, shipping guides, and other publications as they are issued.

Exporter's Encyclopedia

Exporter's Encyclopedia Company, New York.

Practical Exporting

B. Olney Hough, *American Exporter*, New York.

Smith's Commercial Geography

J. R. Smith, Henry Holt & Company, New York.

Export Trade Directory

American Exporter, New York.

Ocean Traffic and Trade

B. Olney Hough, LaSalle Extension University, Chicago.

Statesman's Year Book

MacMillan Company, London.

World Directory

The World, New York.

Kelley's Directory of Manufacturers of the World

Kelly & Company, London.

Lippincott's New Gazetteer

J. B. Lippincott Company, New York.

Modern Foreign Exchange

V. Gonzalez, Hammond & Company, New York.

South American Year Book

Cassier Company, London.

Export Trade Suggestions, No. 35

U. S. Department of Commerce, Washington.

Foreign Credits

U. S. Department of Commerce, Washington.

Consular Regulations of Foreign Countries, No. 24

U. S. Department of Commerce, Washington.

Catalog of Bureau of Publications

U. S. Department of Commerce, Washington.

Diplomatic and Consular List of the U. S.

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Trade Directory of Central America

U. S. Department of Commerce, Washington.

Commerce and Navigation

U. S. Department of Commerce, Washington.

Metric Equivalents, No. 47

U. S. Bureau of Standards, Washington.

CHAPTER XVI

GENERAL SUGGESTIONS

Advertising Department—Sales Department—Accounting Department—Purchasing Department—Production Department—House Organ—Civic Development—Trade Associations—National Organization—Traffic Clubs—Conclusion.

The more important functions of the industrial traffic department have now been discussed in detail, but it remains to suggest the possibilities of this department's rendering service to other departments in the same industry.

ADVERTISING DEPARTMENT

The traffic manager is in a position to assist the advertising manager, or to pass upon advertisements in which the question of price to the consumer is raised. Not infrequently, advertisements offer "freight free east of the Rocky Mountains," or a specified price will be mentioned as applying to that territory, and a different price to points west. "East of the Rockies," however, is a rather general designation; as a matter of fact, there are points west of the Rocky Mountains to which the rate from eastern producing points is less than the rate to points east. While undoubtedly purchasers in these western districts would, in the majority of cases, call the matter to the attention of the sales department, the effect of the state-

ment in the advertisement is to prevent inquiries from bona fide customers who feel that they can purchase from a western jobber to better advantage than from the eastern manufacturer.

In the survey of sources of production and centers of consumption, the traffic man is in a position to develop questions of shortage and to recommend extensive advertising in areas where there is a shortage of his firm's product. Without such assistance, advertising men with little or no knowledge of local conditions or of supply or demand have sometimes tried to sell "coals to Newcastle."

SALES DEPARTMENT

In an earlier chapter we have seen what valuable assistance the traffic department can render the sales department in the preparation of sales charts and in furnishing field representatives with rate books. The effort is well directed and repays many times the expense it entails. The positive statement of a field representative that his prospective customer can obtain the goods for a specified price is much more convincing and satisfactory than to quote him "F.O.B. factory" or "F.O.B. shipping point" and to require him to guess at the probable amount of the transportation charge.

ACCOUNTING DEPARTMENT

A carrier may undercharge as well as overcharge an industry. These errors are usually detected later and a duebill is rendered against the industry for the amount involved. The payment of the duebill of course requires an added item, or items, in the general books

of the organization. Virtually, this amounts to "making two bites of a cherry."

The careful auditing of freight bills before the bill is paid makes it possible for the accounting department to dispense with such additional entries.

If goods are sold on consignment, the proceeds of the sale, less freight and commission, are remitted to the consignor. It has been established in many cases, however, that if an undercharge is made and the railroad cannot locate the consignor, it may proceed against the consignee and recover the amount. Thus the industry suffers a clear loss which would have been avoided had competent traffic men been employed.

PURCHASING DEPARTMENT

By developing sources from which supplies may be obtained at the lowest cost to the industry, the traffic manager can render a valuable service to the purchasing department. By analyzing the bids secured from competitive interests from the standpoint of transportation, road-haul cost, and local transport charges, the traffic department is able to determine which of the bids, if quality be equal, it is most advantageous for the industry to accept.

In the case of imports, a study of the consular reports frequently opens up new available sources of supply if other fields have become depleted or are closed by the fortunes of war.

PRODUCTION DEPARTMENT

In the manufacturing end of the business a continued survey of the output of the plant should be undertaken

at the hands of the traffic department, having in view the standardization and condensation, thus reducing weight and bulk; two very essential factors in the aggregate transportation expense paid by an industry, to say nothing of the added expense incurred in packing articles of unnecessarily large size.

PASSENGER DEPARTMENT

Particularly in those lines of endeavor where there is a considerable out-of-town clientele who call on the firm or where a large number of salesmen are employed, the traffic department can be utilized to draw up itineraries, quote the time of arrival and departure of trains, procure tickets, and make berth reservations. This is a service that is appreciated by the firm's patrons and as concerns its salesmen, leaves high-grade men free from the petty annoyances of looking up these details which might better be handled by some junior clerk.

Many of the salesmen carry samples of more or less volume. In this connection it is a function of the traffic department to see that baggage is properly tagged and the requirements complied with. Very few people understand baggage regulations and rules and are, therefore, continually subjecting themselves to penalties of various kinds. Many articles checked and carried in baggage cars should not be, and in consequence tariffs and laws are violated. There are many instances of loss on record where recovery could not be made for the reason that the contents have not been properly declared.

HOUSE ORGAN

Many of the leading commercial and industrial organizations have magazines or house organs which treat

the activities of the concern from both an external and an internal standpoint. The traffic manager can contribute to this publication interesting articles on happenings in the traffic world, suggestions for the improvement of service, information of value to the dealers, court decisions bearing on loss and damage issues, and the like.

CIVIC DEVELOPMENT

Many of the problems of development confronting the municipality resolve themselves into questions of transportation. The traffic manager should, therefore, be a member of the local chamber of commerce or similar development enterprises, or should appear before such organizations in order that they may benefit by his suggestions for the solution of local and national problems.

TRADE ASSOCIATIONS

Recognizing that "in union there is strength," the traffic managers of competitive industries engaged in handling the same lines of commerce have found periodical meetings of mutual benefit. Annual, semiannual, or quarterly meetings can be arranged at which classification problems, rate adjustments, and general transportation conditions can be discussed with the purpose of securing readjustments advantageous to all.

NATIONAL ORGANIZATION

Numerous national organizations are charged with certain phases of our industrial and commercial life.

The California Fruit Growers Association, the National Implement and Vehicle Association, the National Petroleum Association, the National Poultry, Butter, and Egg Association, and many others are national in their scope or boast a large membership composed of individuals in various sections of the country.

Usually these organizations are represented by a general traffic director. An interchange of ideas between a representative of the industry and the general representative of the association leads, in many cases, to a satisfactory course of action to pursue in adjusting some vexatious transportation complaint or practice.

The premier organization of industrial traffic men is the National Industrial Traffic League. Those eligible to membership are traffic directors, traffic managers, traffic commissioners, or other officials in charge of the traffic of industrial or commercial organizations, and traffic officers of representative shipping concerns in the United States. Nominal dues and initiation fees are assessed to cover the working expenses of the organization. Many standing committees are charged with the scrutiny of transportation practices, and reports from such committees are made at the periodical meetings of the League.

TRAFFIC CLUBS

Practically every large city boasts of a traffic club. Such local traffic clubs differ from the National Industrial Traffic League in the matter of membership, which is not restricted to industrial representatives but includes also representatives of the carriers of a given rank and over. The advantage of such an organization is that it promotes a spirit of good feeling between

the representatives of the two factions, leads to a broader understanding, and adds greatly to the knowledge and ability of the traffic man.

The collective discussion of traffic problems in such group associations cannot be too strongly indorsed. In considering transportation problems, it is possible for one or a half dozen men to overlook some essential factor. This possibility, however, diminishes as more minds are put to work on the subject. Generally, where the discussion has been participated in by a full membership, the apple, core and all, has been thoroly digested.

CONCLUSION

The traffic manager must be continually on the alert for changed circumstances and conditions affecting the transportation under his supervision. As the Interstate Commerce Commission has aptly stated it, a rate which is reasonable to-day may, in the light of changed circumstances, become unreasonable to-morrow; in the same way, a rule which is unreasonable to-day may be reasonable to-morrow.

The continued study of graphs and charts relating to the performance of the department will enable the traffic manager to maintain an effective statistical control over the activities of this branch of the service. It is to be hoped that the readers of this volume will find the way less arduous, and that they may have an opportunity to apply the principles of scientific traffic management as herein set forth.

The opportunities for the traffic man are virtually unlimited. It is said that there are over 500,000 shippers and receivers of freight in this country. Relatively

few of these are served by traffic men of any kind, while others delegate a somewhat superficial exercise of traffic functions to shipping clerks, bookkeepers, or plant managers, tho this is practically no control at all. Moreover, the supply of proficient traffic men is limited. One authority states that there are less than 5,000 trained men of this type to meet this overwhelming demand.

Many concerns are not entirely converted to the idea that scientific traffic management is necessary to the success of their organizations. As a consequence, it is necessary for the traffic graduate to preach the gospel of scientific traffic management, and to show its relationship to the purse strings of the industry. Every instance of substantial traffic loss caused by bad methods should be carefully treasured, so that it may be used as an effective argument to win this type of industry to the fold.

Community gatherings should be attended so that the importance of transportation measures may be urged. Periodical addresses before associations of this kind will do much toward stamping the transportation student as a transportation authority, and will pave the way toward his subsequent advancement in his field.

There is, perhaps, no profession to-day which is so uncrowded as that of traffic management. Nor is there another profession where the novice may equip himself in so short a time and obtain a foothold on the upper rungs of the ladder of success so quickly. Medicine or law requires first, long periods of study, then, after bar or board examinations are finally passed, several years to develop a clientele sufficient to secure comfort and ease, and the community's esteem.

Comprehensive courses of instruction prepared by

recognized authorities in the transportation world will conduct the novice in this new field from the origins of the transportation instrumentalities in the United States, thru the periods of development, concluding with this latest and most important phase, scientific traffic management.

Finally, let him who reads ponder well the possibilities suggested. In this field he can qualify; in order to earn more, learn more.

THE TRAFFIC FIELD

PART II

ASSOCIATED TRAFFIC MANAGEMENT

BRUNNER ROBESON

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THE TRAFFIC FIELD

PART II

ASSOCIATED TRAFFIC MANAGEMENT

Term Defined — Organization — Membership — Specialized versus General Lines—Compensation—The Percentage Plan—The Measured Service Plan—The Membership Plan —Equipment — Collection of Claims — Overcharges — Loss and Damage Claims—Service—Rate Adjustments—Transportation Surveys—Publicity—Rural Opportunities.

By the term "associated traffic management" is meant traffic management by one individual for a number of different industries or principals. This individual may term himself a "claim adjuster," a "traffic commissioner," or a "commercial audit bureau." He acts as the intermediary between the railroads and two or more allied or nonallied industries. Associated traffic management is, however, distinguished from community traffic management as carried out under the direction of boards of trade, chambers of commerce, and commercial clubs.

The work of the bureau resembles that undertaken by the industrial traffic department of a single industry. It includes such features as routing, classification surveys, rate compilations, rate quotations, the auditing of freight bills, the presentation and handling of freight claims, arrangements for special service, car supply, and the prosecution of formal and informal complaints before the Interstate Commerce Commission or other public utility bodies.

ORGANIZATION

Obviously, not all business concerns have shipping enough to justify paying for the full time of a competent traffic man. The shipping of one butcher, baker, or candle-stick maker might be a negligible quantity. The combined shipping of a number of men engaged in similar lines would, however, comprise tonnage sufficient in volume to warrant the employment of competent assistance. This fact has led to the creation of a new field for traffic men since 1910, when the Act to Regulate Commerce was effectively amended.

MEMBERSHIP

Under this type of organization, a number of small manufacturers, commercial houses, or retail merchants are formed into an association, which employs one man as traffic manager, to analyze the transportation problems of such a clientele.

The success of the bureau depends on the number of clients secured, on the amount of claims recovered, and on the basis of compensation.

To secure clients enough to insure the success of the organization, an extensive advertising or solicitation campaign must be conducted by letter or interview among the smaller dealers and manufacturers in a city or a district. This campaign must explain the character of the services to be performed, and must emphasize the advantages of the group plan, the qualifications of the organizer, and the cash benefits that will accrue to subscribers at a nominal cost.

SPECIALIZED VERSUS GENERAL LINES

If the activities of the district are varied and extensive, it is possible to confine the organizing campaign

to a particular line of business, for example, grain mills, iron and steel factories, brick kilns, or stone quarries. Usually, however, varied lines of business must be merged into the association, as illustrated in Fig. 59.

Preferably the membership should include shippers and receivers of freight in carload lots, since this class of business offers the greatest possibility for recovery of claims in the auditing of transportation charges. Such concerns will, in addition to their carload traffic, have a sufficient volume of less-than-carload traffic to tax the working capacity of the traffic representative to the utmost.

COMPENSATION

The basis for compensation in an organization of this kind is very difficult to determine, especially at the outset, since there is no way to measure the time allotment necessary to handle the affairs of an individual subscriber. It may be found, for example, that the handling of the account of one firm required three-quarters of the counselor's time, another account required only one fourth. Manifestly, it would be unfair to charge both members alike, and the basis of compensation must consequently be fixed on a graduated or sliding scale to result in a fair apportionment of the expense.

Existing bureaus have employed various plans in meeting this situation, and the most satisfactory are (1) the percentage plan, (2) the measured service plan, and (3) the membership plan.

The Percentage Plan

The percentage plan is largely employed by commercial audit bureaus whose functions are confined, for

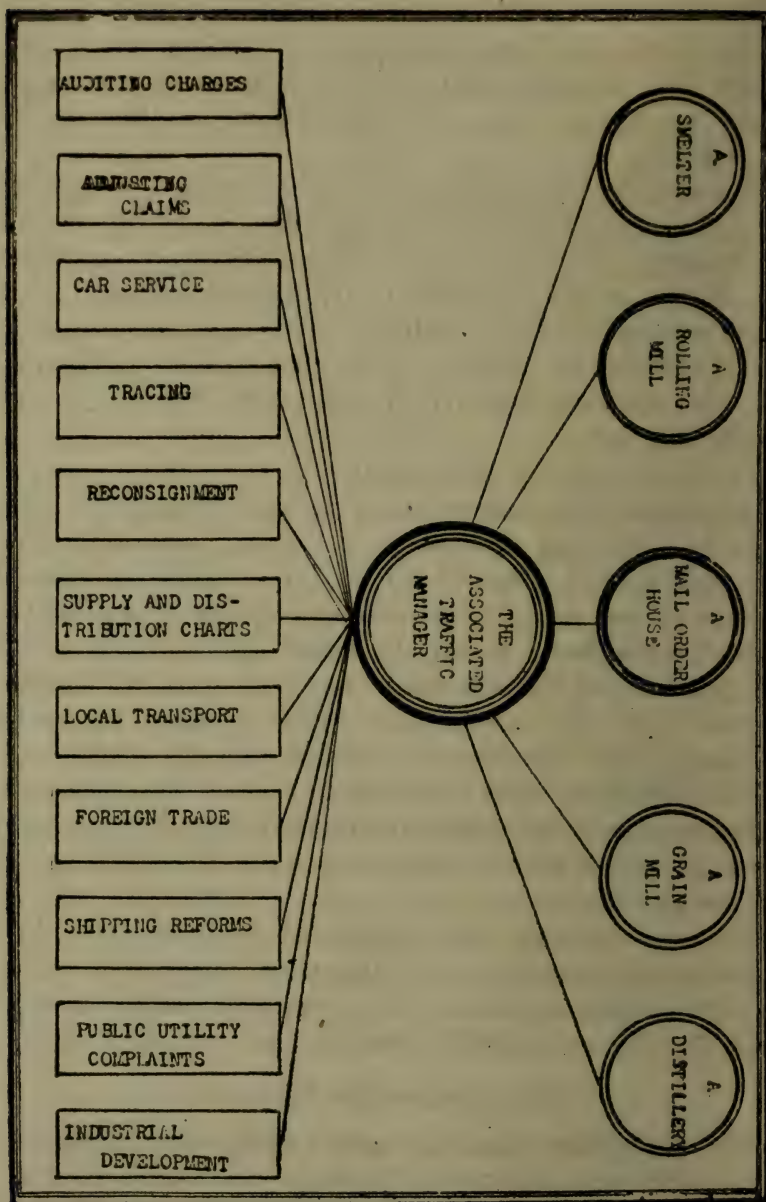


FIG. 59.—Traffic Counselors' Service Plan

the most part, to the mere auditing of freight bills and the handling of overcharge claims. Customarily under this plan, 50 per cent of the amount recovered accrues to the association, and 50 per cent to the client. On first thought this may seem rather high, but it must be borne in mind that the majority of railroad computations are correct, and that it is necessary to audit a great many bills before an error worth while is discovered. This is particularly true where a considerable portion of the bills represent small shipments.

Some of the larger auditing concerns take bills on a so-called "second or third audit." That is to say, the bills come from the traffic department of the client, or from some other auditing bureau to be reaudited. A single third-audit account has been known to yield sufficient returns to pay the office expenses of a rather large association.

The carriers look upon commercial auditing concerns as interlopers and usurpers of the functions of the shippers. They feel that the shipper need only call their attention to the error to be refunded the entire amount involved without dividing it with anyone.

The commercial audit bureaus defend themselves by pointing out that, tho many of their clients are not in the least conversant with transportation methods or charges, their business does not warrant the expense incurred in employing a traffic expert. Therefore, such industries would recover nothing if they were unable to avail themselves of the services of the commercial audit bureau. "Half a loaf is better than none."

The Measured Service Plan

Under the measured service plan, rates are furnished and bills are audited at a cost of so much per unit.

This unit may be based on 100 quotations or revisions, or upon 1,000, and a sliding scale is established whereby there will be proportionate decrease in the charge for the second unit, and a similar reduction in the charge for the third. A charge might be established for the first thousand based on \$5.00 per hundred, and each additional hundred, up to and including the second thousand, would be \$4.50, and \$4.00 per hundred might be the rate of charge for the third thousand.

The advantage of the graduated or measured service plan is that the bureau is compensated for the work performed. Perhaps the income may not be as large as that resulting from the percentage plan, but it is more certain, and, in the end, more satisfactory. Some of the leading traffic organizations of the country work under this plan.

The Membership Plan

Under the membership plan, the membership contributes to the support of the association on a predetermined rate of membership, ranging perhaps from \$50 to \$200 or more per annum. Out of this fund, the salary of the traffic commissioner is paid, and also whatever office expense he finds necessary in serving intelligently the members he represents.

This latter plan predominates largely in the traffic organizations of trade associations, and in the case also of community traffic organization.

EQUIPMENT

The shipping of a single industry, or even of several industries of allied lines, is covered by relatively

few publications. But in the case of an association of diversified lines of activity, the tariffs and transportation schedules must be more numerous, and the equipment more elaborate. A traffic library and other shipping adjuncts such as guides, atlases, tariffs, and directories are indispensable to the intelligent prosecution of such a work.

COLLECTION OF CLAIMS

Overcharges

When the collection of overcharges is attempted in the name of the audit association, difficulty is sometimes experienced in dealing with carriers who refuse to recognize the association as a party to the transaction between shipper and carrier. When such a contingency arises, the shipping client executes a power of attorney appointing the manager of the association an agent to act in the name of the industry in matters pertaining to transportation charges and any other detail which has been delegated to him, and directing payment to be made to him.

The more progressive organizations, however, are effecting the collection of the claim in the name of their client. For this purpose, the client furnishes the bureau a quantity of his letterhead which is used for letters accompanying claim papers to carriers. These letters are signed by the manager of the association as the traffic representative of the industry for whose account the claim is filed.

With an intelligent follow-up system and close coöperation with the industry, the association manager is informed of the payment of the claim, and can bill on the client for the association's proportion of the

recovery under the percentage plan of compensation. Under the measured service plan or under the membership plan, rendering of bills against the client or specific services of this kind is not contemplated, but the claim should be vigorously prosecuted until the matter is closed to the satisfaction of the client.

Loss and Damage Claims

These associations also specialize in the prosecution of claims involving loss or damage to property. This class of claims is attractive, as considerable amounts are usually involved, and, except in rare instances, the claims are largely questions of fact that can be easily substantiated. The basis of compensation under the percentage plan of operation is, consequently, materially reduced. The average charge assessed for collection of such claims is approximately 10 per cent. Furthermore, the industry agrees to bear any expense incurred if it becomes necessary to prosecute the issue thru the courts.

It is customary to retain some competent attorney in the locality as legal advisor to deal with all cases involving litigation. Such issues can then be prosecuted with a lesser aggregate expense to the association than if available talent were called upon from time to time as occasions demanded.

SERVICE

In addition to the collection of claims, many commercial associations of this type are inaugurating a type of service identical with that rendered by the quotation clerk of an industrial traffic organization to

the sales department or to prospective customers. They quote to their clientele rates of transportation on shipments made or about to be made. For this phase of the work, the measured service plan of compensation has proved especially adaptable.

Rate charts for the benefit of shipping departments, classification and packing specifications for the benefit of shipping room employees, and similar rate-schedule data are furnished by the association for the benefit of its clientele.

RATE ADJUSTMENTS

Not infrequently, in the handling of commercial audits, discriminatory rate adjustments will be developed, and at the same time the amount recovered on the freight bill will not be sufficient to warrant the audit bureau in undertaking the prosecution of the complaint before the public utility body before which it may be placed.

In such instances, it is customary to bring the matter to the client's attention, and to ascertain if, in view of future shipments, it is desirable to effect the necessary readjustment. If an affirmative response is developed, such cases are treated separately from the general contract existing between the association and the client, and an agreeable basis of remuneration is determined to compensate the association for the liberal allotment of time necessary in preparing complaints, exhibits, and other evidence necessary to support the issue.

TRANSPORTATION SURVEYS

In many instances, industrial concerns can be prevailed upon by the association to sanction a traffic sur-

vey of the firm's lines of inbound and outbound shipments for the purpose of developing the most advantageous means of transportation to employ in order to secure both safety and the lowest transportation cost.

This is a very important work and involves an exhaustive study of existing methods employed by the client, of tariff and classification requirements, and of practices employed by competing houses in the same or other localities.

In the final report of the work, a detailed classification list is incorporated, showing all the articles handled by the firm, the classification ratings assigned to it in various localities under the existing classifications, and recommendations as to the form of packages to employ.

The association is entitled to additional compensation over and above that specified in the contract for such service, and the amount to be paid is to be determined, as in the case of rate adjustments, by the amount of labor involved.

PUBLICITY

It is possible to continue to add to the membership of the organization from time to time. Expressions of goodwill from members of the association, and records of particularly valuable service rendered by the bureau, are means of recruiting new members.

The traffic commissioner of the association might address periodical meetings of the employees concerned with the actual shipping of the clients. He would choose such topics as matters of current legislation

affecting transportation, efficiency reforms as applied to cartage, packing, and the preparation of documents. The meetings could be held in the association rooms.

Where the meeting plan is undesirable, it is possible for the association to issue a monthly or semimonthly leaflet, setting forth matters of general interest to the clientele which it represents.

RURAL OPPORTUNITIES

Rural students of transportation have a big opportunity to turn their talents to account by organizing the growers and producers in their district for enterprises of this type, and to arrange for collective marketing and purchase.

Touching on this point, an editorial appearing in the *Trade and Transportation Bulletin* is terse and to the point:

Quite frequently those engaged in making transportation a study complain of the lack of opportunity to join theory with actual practice in the rural districts in which they may be located.

The department of agriculture has only recently issued a bulletin treating in part, so far as concerns producers of agricultural products, the desirability of forming coöperative associations for the intelligent marketing of their wares. In this it points out the advantages which accrue in the shipping of carload quantities as against less-than-carload consignments; the employment of intelligent shipping methods; the development of more effective markets, etc.

The opportunity in traffic work should be measured not so much on the basis of population or size of a particular community as on the basis of production or consumption. Where any considerable amount of live stock, grain, fruit, vegetables,

etc., are produced, coöperative traffic management can be employed with success; while none of the individuals could, perhaps, pay anything like a remunerative salary on a contributory plan thru an effective organization, the traffic director of such would be amply rewarded.

As an illustration of the work that might be properly contemplated by a rural traffic association, take the question of soil fertility. A canvass of the district may be made, and the quantity and character of the fertilizer to be used ascertained, after which quotations can be obtained from various manufacturers. If it is presumed that the delivery could be made at the same time, the association would in all likelihood obtain a lower charge for the material to begin with; moreover, moving to destination in carload lots would effect a saving in transportation costs. Agricultural implements, farm machinery, etc., under the coöperative purchase plan, could be secured from the manufacturers direct, and at a lower cost to the individual than he would obtain under the present system of purchase thru retail dealers or mail-order houses.

Frequent meetings could be held for the benefit of the members, thus affording an opportunity to exchange views on subjects of particular interest, such as soil fertility, fertilizers, agricultural implements, farm machinery, remunerative crops, desirable markets, effective distribution, etc.

There are, of course, national associations of various kinds, for example, dairymen, fruit and vegetable growers, etc., whose activities in some degree are concerned with these questions; but they all, to some extent, lack the immediate supervision so essential in securing efficiency in any line of endeavor.

It is to be hoped that our readers who are thus situated will carefully weigh the foregoing and, if there is any considerable amount of shipping to or from their locality, that they will put this plan into effect in the interest of themselves and those with whom they might be associated.

Every man who has any considerable amount of shipping is a logical prospect as a member of an organ-

ization of this type, whether he be the manufacturer in the largest metropolitan center or an agriculturalist in the sparsely settled west. The opportunities for association management of this kind are virtually unlimited.

THE TRAFFIC FIELD

PART III

COMMUNITY TRAFFIC MANAGEMENT

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THE TRAFFIC FIELD

PART III

COMMUNITY TRAFFIC MANAGEMENT

Introduction—Historical Antecedents—Commercial Associations—Development—Federation—Purpose—Transportation for the City—Competition of Localities—Coöperation in Rate Adjustment—Qualifications of Traffic Commissioner—Organization and Control—Methods of Operation—Equipment—Object and Function—Types of Service—Methods of Financing—Buffalo—Rochester—Syracuse.

INTRODUCTION

The type of organization usually known as an "association of commerce," "chamber of commerce," or "merchants' exchange" of a given locality, furnishes a field for community traffic management. Too often, such an organization is only a social club. Its rooms, on one of the main streets, are equipped with comfortable lounging chairs, one or more billiard or pool tables, a more or less complete library, and copies of such publications as *The Illustrated London News*, *Life*, and *Judge*.

The organization has no definite program or constructive policy, and failure to put before its membership local problems worthy of consideration accounts, as a rule, for its natural death, notwithstanding the enthusiasm which may have attended its establishment. The appellation "business men's club," "chamber of

commerce," or the like, to such an organization is a misnomer. Yet such is the situation, especially in the smaller communities.

A competent business or traffic manager has, in many cases, restored such a languishing organization, and made it a power in the community, and an essential factor in the success of its members.

HISTORICAL ANTECEDENTS

Commercial Associations

In the recent years of progress, chambers of commerce have become important factors in the growth and welfare of our cities. In this country the term "chamber of commerce" is used interchangeably with "board of trade" and "commercial club," to signify a typical association of business men. These associations and commercial organizations are not of recent origin, but date back to the merchants' guilds of the twelfth century.

History shows that the name "chamber of commerce" was applied for the first time to an association of merchants of Marseilles during the fifteenth century. The first board of trade was formed by Charles I of England in 1636. These early organizations were closely affiliated with the government, and, to some extent, this is true of modern European organizations of a similar type.

Development

In this country, the Chamber of Commerce of the State of New York, founded in 1768 at New York City, is the oldest. Boston and Philadelphia soon

afterward organized similar associations. These bodies were composed of business men who met regularly to discuss trade matters and to pass resolutions on certain important commercial questions, and they were the forerunners of the various bodies which have since been founded.

Number and Classification

The number of these organizations steadily increased from 4 in 1801 to about 3,000 in 1898. In the winter of 1912, the Senate directed the Department of Commerce and Labor to furnish a list of national, state, and local commercial organizations; the compilation was made by the Bureau of Foreign and Domestic Commerce of this department, and was printed early in 1913. On that date there were 3,356 commercial organizations in the entire country, of which 243 were interstate, national, or international bodies, 183 were state and territorial, and 2,930 mere local.

In the first class fall such organizations as the New England Business Federation and the Pan-American States Association. In the second class fall the California Development Board and the Manufacturers and Producers of California. Of the local organizations comprising the third class, the large majority are interested only in civic and industrial development. They are known by various designations, such as chambers of commerce, boards of trade, commercial clubs, commerce clubs, and commercial associations.

Federation

Labor in this country is more or less organized as a national body. Agricultural interests are com-

bined in granges and other sectional groups. Therefore, it is but fitting and proper that commerce, one of the other great elements of our national life, should have a nationally organized representation in governmental affairs. As recently as 1912 there was formed the great national federation of commercial organizations known as the "United States Chamber of Commerce," which superseded the National Board of Trade and the National Council of Commerce.

The purpose of the United States Chamber of Commerce is to establish closer relations between the commercial interests of this country and the federal officials and legislative bodies. Its activities center in the annual meetings held in various large cities and attended by delegates from all member organizations. Between meetings, the referendum is employed on all important matters, the members voting by mail.

Purpose

As commercial organizations have increased in number and have federated into a national body, their methods have advanced and their functions have grown. The commercial organization of the present day is the result of commercial and industrial evolution.

As stated by Mr. S. C. Mead, secretary of the New York Merchants' Association, the main purpose of a chamber of commerce or kindred body is to stimulate, foster, and protect the commercial and industrial activities of the community thru coöperation and coördination on the part of the citizens. Collateral subjects such as civics, social betterment, and welfare work are to be considered by commercial organizations only so

far as they concern the commercial and industrial situation.

All cities are finding it an absolute necessity to recognize the commerce body as an important economic factor. In some quarters, it is likened to a garrison, vigilant and quick to perceive changing conditions and to observe important movements by other trade centers. Civic improvement, industrial surveys, conventions, harbor improvements, and transportation are essentially part of any city-building plan undertaken by a commerce body.

TRANSPORTATION FOR THE CITY

No city can afford to overlook the subject of its transportation. Competition between cities as markets for the distribution and consumption of products is rapidly becoming keener, and the question of transportation has, therefore, become a larger problem for every progressive and growing city. To-day a city that is looking after its welfare will certainly devote a great deal of attention to its arteries of commerce, without which it would be practically isolated. Especially is a city of extensive shipping interests dependent upon its transportation for its commercial and industrial growth.

COMPETITION OF LOCALITIES

In order that a city may prosper, it must have adequate transportation and equitable freight and passenger rates. Numerous complaints filed with the regulating commissions have disclosed the existence of rate structures that were retarding the growth and

development of a particular trade center, while its competitors, with the rate situation favorable to them, were progressing. Not only must unjust discriminations prejudicial to a city be eliminated, but rates advantageous to competitive cities, tho unfair, must likewise be adjusted.

COÖPERATION IN RATE ADJUSTMENT

A progressive city which means to handle such matters adequately will establish a traffic bureau, either as a branch of its commercial organization or as an independent organization. The following is an excerpt from the organ of the Milwaukee Chamber of Commerce, which has founded a traffic bureau:

In order that a city may become a great commercial and manufacturing center, it is necessary that freight rates be established and maintained on an equal basis with other cities and markets. The question of freight bureaus has been prominently before the business communities of the different sections of the country for some years, and is to-day recognized as the most efficient manner of guarding the shipping interests of the different localities. It is also being encouraged by the railway interests, and it is a mistake to suppose that this policy antagonizes the railroads. On the contrary, they find it of advantage to treat with an organization such as a freight bureau with a representative railroad man at its head, in preference to treating with individuals, and thru this means the business community is brought in contact with the transportation interests, and measures that are for their mutual interests are considered in a businesslike manner. The position that the manager of the freight bureau holds is more of an intermediary between the shipper and the railroad, to whom the troubles of each may be told and exploited, and thru whose intervention the equities and justice of a situation may be

determined, and results reached which are fair and satisfactory to both.

QUALIFICATIONS OF TRAFFIC COMMISSIONER

The type of organization of a freight bureau depends largely upon the volume of transportation business which the bureau supervises, and upon the size or importance of its clientele. Usually the executive responsibility is vested in a traffic commissioner or traffic manager, but in smaller organizations the duty of supervising traffic is assigned to the secretary.

A competent and broad-gauge commissioner must possess a vast fund of essential information; he must be a close student of transportation and business economics. In his profession of traffic management, as in law or medicine, in which only much practical experience makes perfect, he must possess a thoro knowledge of fundamentals as his preliminary equipment. This broad training and knowledge can be obtained only by a systematic study of freight classification, rate construction, the law of carriers, railway regulation, and statutory regulation.

One function of the commissioner is to solve the problem of organization by dividing his force and assigning tasks in such a manner as to secure the best results possible under the circumstances peculiar to his locality.

ORGANIZATION AND CONTROL

Traffic bureaus in cities of half a million population or more are operated by a salaried manager and a staff advised by a traffic or transportation committee,

which, in turn, reports to the executive committee or board of directors. Such is the form of organization in the chambers of commerce of Philadelphia, Cleveland, and Baltimore, the Business Men's League of St. Louis, and the Baltimore Merchants' and Manufacturers' Association.

Descriptions of specific plans in larger cities are valuable, and the following outlines are therefore presented:

METHODS OF OPERATION

The traffic bureau of the New York Merchants' Association is under the direct supervision of the secretary of the association, who is responsible to the board of directors. It is headed by a manager, who has one assistant manager and a chief clerk. The stenographic, clerical, mailing, filing, and other assistance is furnished by the general office force from outside the bureau. Questions of principle and policy are determined by the transportation committee of the association, which reports to the board of directors, who have the final word in determining and defining the policy of the bureau.

In the Chicago Association of Commerce, transportation affairs are administered by a freight traffic committee of nine members, chosen from the sustaining membership of the interstate division of the association. The chairman of this committee is the director of traffic. All the business of the association with the transportation interests, both rail and water, is conducted by the freight traffic committee, subject to the supervision of the board of directors. The chairman and one member of the freight traffic committee are

ex-officio members of the executive committee of the association.

In Boston, the chamber of commerce maintains a transportation bureau, the detail work of which is in charge of the manager of the transportation bureau, who has an assistant and secretary. The manager of transportation submits recommendations on traffic and transportation matters to the committee on transportation for a determination of policy. This committee submits its recommendations to the board of directors; and when the policy has been determined, the detail work of executing that policy devolves upon the bureau.

Similar plans have been adopted in cities with a population of less than one-half million. For example, the Detroit Board of Commerce has placed the transportation bureau in charge of a commissioner who is a member of, and reports to, the transportation committee, which is appointed by the board of directors. The traffic commissioner is assisted by a rate clerk and a secretary.

Generally speaking, the organization of the existing traffic or transportation bureaus is on the order of the chart shown in Fig. 60, but in a few cases the manager of the bureau reports to the executive committee or to the board of directors.

EQUIPMENT

All well-equipped traffic bureaus maintain files of tariffs containing interstate and intrastate rates applying on steam railroads, electric lines, and boat lines, for the purpose of quoting rates and of furnishing routing instructions on shipments and in connection with the adjustment of freight claims. Classifications,

Grand Rapids Association of Commerce

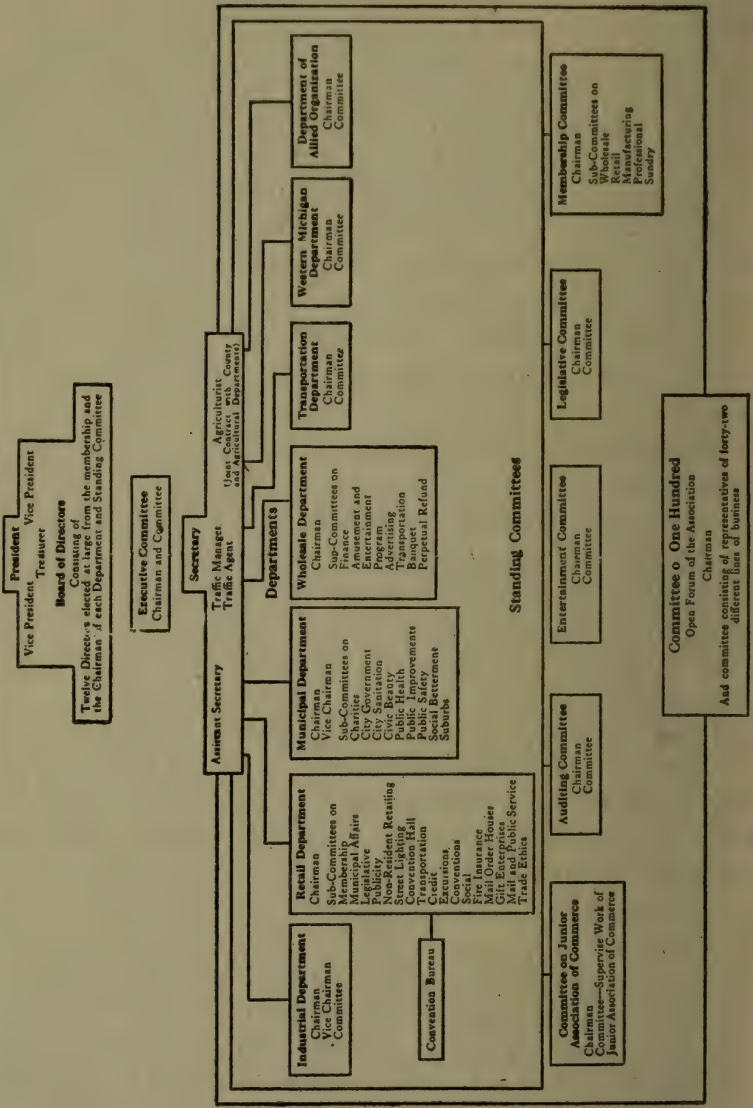


FIG. 60.—Organization of a Chamber of Commerce

express tariffs, and circulars, as well as special privilege tariffs covering reconsigning, milling in transit, switching, etc., are also kept on file. The methods of filing are legion, but adaptable systems are fully described in another section of this work. A complete reference library should also be installed, special attention being given to trade journals.

OBJECT AND FUNCTION

As already remarked in this chapter, commercial and civic development depend closely on transportation, and the traffic commissioner holds the key to the future industrial and commercial growth of his city. The successful accomplishment of the purpose of the chamber of commerce, the board of trade, or the business men's league depends on the quality of the service furnished by the traffic bureau. It is, therefore, important to consider the kinds of service to be rendered and the functions to be performed.

Many people have the erroneous idea that the duties of a traffic commissioner begin and end with the study of transportation rates. This, however, is a very narrow conception of the work of a traffic bureau. The bureau should be given the broadest duty of supervising all the details of transportation of the products received and shipped by the members of the organization of which it is a part. This function includes the purchase of transportation, the audit of transportation accounts, the adjustment of claims, and an understanding of rights and obligations under the law.

TYPES OF SERVICE

The aim of the traffic commissioner should be to maintain a watchful scrutiny of all transportation and

traffic matters pertaining to the community as a whole, to bring to a successful conclusion, thru friendly coöperation, all differences between members of his organization and the carriers; and, where this cannot be done, to bring legal action to compel an equitable and favorable decision for the benefit of his community. In the larger cities the general rule is to handle no complaint which does not involve a general principle, but elsewhere the prevailing custom is to handle all complaints upon request. The reason for the difference is that in the smaller cities personal service as well as community service is expected by those who support the bureau.

A list of possible kinds of service, which it must be understood can be extended or limited to fit the particular need, is as follows:

Quotation of rates.

Information on routing.

Revision of freight bills.

Filing and prosecution of claims.

Filing and prosecution of complaints.

Securing equitable rate adjustments.

Securing classification changes.

Adjustment of disputes on special services.

Interpretation of tariffs.

Legal advice on transportation matters.

Supervision of express and parcels post service and rates.

The traffic commissioner should, from a transportation standpoint, be a market analyst. His views and other live traffic news should be passed on to his clientele thru a weekly or semimonthly bulletin. It is obvious that the scope of the activities of a conscientious

and ingenious traffic commissioner cannot be specifically defined, for he has a rich field in which to exercise initiative, invention, and adaptability. One point which must be borne in mind is the quasi-municipal nature of a chamber of commerce, commercial club, or trade body, which makes the work of the commissioner of the greatest public benefit.

COMMUNITY SERVICE

First consideration should be given to opportunities to secure better service or terminal facilities, and to general rate adjustments which affect all shippers. Individual matters, such as rate quotations, freight bill audits, and claim adjustments, which affect only individual shippers, may be regarded as of secondary importance. Practically all organization traffic bureaus confine their efforts, as far as possible, to indorsing only those propositions which are for the greatest good of the greatest number.

In this respect, they differ from a traffic department formed and financed by shippers only, or one conducted by a single firm or corporation. In the latter case the primary, and perhaps the sole, object is to serve the interest of the individual shipper, whereas, in the case of community organization traffic bureaus, the primary object is the protection of the interests of the community as a shipping and commercial center, while service to an individual shipper is of secondary importance. When, however, a special charge is made for the traffic service by the community bureau, the rights of the individual shipper are given attention equal to that devoted to the broader and larger problems.

METHODS OF FINANCING

Like all other business organizations, the chambers of commerce, boards of trade, and commercial clubs are confronted with their problems of finance, and this problem must be considered when the installation of a traffic or transportation bureau is contemplated. Some organizations, especially in large cities, finance the traffic bureau entirely out of the general fund; others, especially in small cities, supplement the general fund with a special subscription from the users of the bureau; others, but only a few, rely entirely on special subscriptions.

Of the 60 organizations answering a questionnaire sent out by the Organization Service Bureau of the Chamber of Commerce of the United States, but 13 made any charge for traffic service. No charge was made in the largest cities. Only 2 of the 8 organizations in cities of 250,000 to 500,000 made a special charge, and in cities of 100,000 to 250,000, 5 of the 15 made a charge; in 4 out of 13 cities of from 50,000 to 100,000, a charge was made; and in all but 4 out of 17 cities of less than 100,000 population a charge was made. Of the 13 organizations making a charge for service, only 6 were financed out of the general fund. Summarized reports of some bureaus follow:

Buffalo Chamber of Commerce

The traffic service bureau is maintained thru subscription, but is supported, in part, out of the general funds of the chamber, tho it is supposed to be self-supporting. The subscription fees in support of the bureau are predicated upon a fixed cost for each type

of operation performed. This is determined on the basis of the total cost of operation of the bureau for one year for the various services performed, apportioned according to the expense involved in each operation and reduced to a basis of cost for each individual operation.

Rochester Chamber of Commerce

Charges are made on the basis of amount of freight paid, nonmembers being charged full-rate and members half-rate. There are three schedules of charges: (1) for the checking of freight and express bills by the week or month, and the preparation of claims for all overcharges, such claims to be presented and followed up by the subscribers; (2) for the same service as (1), plus the presentation and prosecution of claims by the chamber; (3) for the same service as (2), plus the preparation and prosecution of all claims for lost or damaged goods, the handling of a limited number of tracers, and any other special service which may be added to the department during the year.

The schedule of fees is, respectively, \$20, \$30, and \$80 a year for the three classes of service for those paying \$1,000 freight a year, and this is graduated to \$270, \$405, and \$1,080 a year for those paying \$100,000 freight a year. The bureau is in process of development, and complete plans have not been determined.

Syracuse Chamber of Commerce

Members holding four or more plural memberships participate in service of every character without additional charge. Members holding less than four mem-

berships or subscribing less than \$100 annually pay for service. The rules for the latter are: Claims are handled for 25 cents each, and, if collected, a charge will be assessed of 10 per cent of the amount collected, less the handling charge. A flat rate of 10 cents each will be assessed for tracing delayed freight and express shipments. A flat rate of 10 cents per bill will be charged for auditing freight and express bills. If individual cases are handled before the Interstate Commerce or public service commissions, or if classification adjustments require special attention and necessitate the filing of a brief or a formal complaint and going before the Commission in person, there is a charge for actual expenses, regardless of the number of memberships held.

Sioux Falls Commercial Club

The traffic bureau is organized and maintained by subscriptions to a special fund by the larger shipping interests of the Commercial Club. The finances and activities of the organization are directed by a regularly elected board of directors of seven members. The subscriptions are made in the form of guarantees, and the guarantee required is determined according to the size and interest of the firm. The minimum guarantee is \$50 per year, and the maximum is \$150. The subscribers are assessed 25 per cent at the beginning of each year, and subsequent assessments are made as expenses are incurred, in any amount under the maximum. Last year the total amount assessed was 75 per cent of the amount subscribed.

These are typical illustrations of the systems used when special charges are made. It is significant, how-

ever, that in the majority of instances the activity of the traffic or transportation bureau is financed entirely out of the general fund.

SUMMARY

The traffic and transportation bureau of the chamber of commerce is a striking proof that the age of individualism, rivalry, and jealousy has passed, and that a period of active coöperation is present. As the transportation industry has become surrounded with complex laws and technicalities, individual shippers have realized that they must have trained men to supervise their traffic affairs. Naturally this recognition spread to organizations of shippers, and then to the larger community organizations. The work of a traffic commissioner for a quasi-municipal organization is essential to the life of the community, and we must look to our technically trained men for the extension of this broad field of endeavor.

The men who go into this field must not only be well trained in technique but they must possess certain qualities of the missionaries and must preach the gospel of efficient traffic management, for many communities and some shippers' organizations have not yet realized the efficiency and economy to be gained thru the traffic department.

THE TRAFFIC FIELD

PART IV

PUBLIC UTILITY COMMISSION WORK

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THE TRAFFIC FIELD

PART IV

PUBLIC UTILITY COMMISSION WORK

State and Federal Regulation Problems—Incorporation—Construction—Operation—Compensation—Legislation—Organization—Administration—Oklahoma Plans—Rate Department—Accounting Department—Engineering Department—Telephone Department—Private Corporations—Subordinate Positions.

STATE AND FEDERAL REGULATION PROBLEMS

At a very early date, it became apparent that the government—federal, state, and municipal—should exercise some control over transportation enterprises and other public utilities operating within their respective domain, in order to prevent discrimination and abuse.

For that purpose, the majority of the states have created public utilities or railroad commissions which are charged with the administration and enforcement of the state laws respecting transportation instrumentalities. Federal control is expressed in the Act to Regulate Commerce, which is administered by the Interstate Commerce Commission.

The creation of these bodies has added another attractive field in which the proficient traffic man may dispose of his services, tho, in some instances, it is unfortunately true that commissioners are chosen for their party affiliations rather than for their knowledge of transportation conditions. In most jurisdictions,

however, the system of making purely political appointments has been largely discarded, and a certain fitness for the position is required of the applicants.

The scope of the activities of these commissions differs widely in different states. In one state, a commission may be vested with authority to inquire into only certain phases of railway operation, while in another, the authority vested contemplates all transportation activities. The problems which come before commissions of the latter type may fall into any one of the following divisions: (1) problems of incorporation, (2) problems of construction, (3) problems of operation, (4) problems of compensation, and (5) problems of legislation.

As regards the various states, public utility regulations are not concerned totally with matters pertaining to transportation, but any other items of public welfare, such as telegraph and telephone companies, water and electric light companies, gas companies, local street traction companies, elevated and subway lines, grain elevators, and warehouses, are subjected to review by commissions.

Incorporation

In the promotion of new transportation enterprises, a comprehensive investigation is necessary to determine the merits of the project. The country is replete with evidences of ill-advised railroad construction. Transportation companies of the same or of a different type have been permitted to construct lines parallel to those of existing companies in an area that could support only one company adequately.

In France, before a charter of incorporation is granted, the projection of the railroad is intelligently

surveyed. Positive assurance is obtained that the district is not already adequately supplied with transportation facilities, and that the new project is an actual necessity. The intelligent prosecution of such a policy in this country would do much toward developing many of the inland counties that are not now served by transportation companies of any kind.

Construction

Questions of railway construction frequently involve the granting of the right of eminent domain whereby private property may be condemned for the use of transportation enterprise. Questions like the elimination of grade crossings, the surrounding of the right of way by necessary safeguards in the form of fencing, cattle guards, danger signals, and the like, frequently come before the commission for review, and for the issuance of an order.

Operation

In the matter of operation, the quality or frequency of service is sometimes a bitter bone of contention between the carriers and the public, and the commission has to intervene and endeavor to adjust the situation amicably. Such questions as the number of trains, the stopping of limited trains, the installation of terminal facilities, the length of sheets used in berths of sleeping cars, ventilation of passenger equipment, drinking cups and water, quarantine regulations for live stock, whistle and bell signals, are a few of the momentous questions which have occasionally occupied the attention of our high-salaried commissioners.

Compensation

As concerns the traffic field, the question of compensation is perhaps the most acute issue confronting these bodies. The common law conveys to common carriers the right to exact a reasonable charge for their services. What, however, a reasonable charge is can be determined only after a very exhaustive investigation, supplemented by the testimony of experts and by the introduction of voluminous exhibits of figures and charts.

At this point, the trained traffic man comes into prominence, for he is an expert, and he can prepare the necessary evidence. A lawyer of average training makes a sorry spectacle in handling rate issues or traffic complaints because of his unfamiliarity with the fundamental principles of traffic work. Likewise, the traffic man with experience but without technical training does not gain anything by comparison with his legal brother; he is unfamiliar with the points of law, the court procedure, and the method of handling public utility complaints.

Graduates, however, of responsible institutions offering courses in scientific traffic management possess the necessary qualifications to prosecute this work intelligently. Many men engaging in this work with considerable success have been so trained.

Legislation

With respect to problems of legislation, the transportation problem is an everchanging kaleidoscope; the legislation of to-day may not be sufficient for the needs of to-morrow. As a consequence, the commission should

be alive to the demands of the day so that, when the need of additional legislation becomes apparent, it can make its recommendations to the legislature or to congress, and the law can be passed, giving, if necessary, authority to the commission to administer it.

ORGANIZATION

No uniformity prevails in the organization of these commissions; the military, the line-and-staff, or the functional type of organization is employed. Fig. 61 indicates a line-and-staff organization with a plural executive control. In the case of the more progressive commissions, however, the functional type seems to predominate. In this type of organization, a certain commissioner, or a branch of the commission, will decide upon complaints falling within a certain province, namely, telegraph and telephone; another division may pass on questions relating to water rates and electric light rates; and a third division, on the practices of a common carrier.

As a rule, a commission consists of three or more commissioners, a secretary, a staff of technical experts, and a clerical force to attend to the necessary routine work. In some cases, the commissioners are elected by the voters of the state; in other cases the commissioners are appointed by the governor, their term of office varying in the different dominions and in some instances, a proviso being ingrafted in the statute creating the commission that the commission is not to be composed exclusively of adherents of any one party.

In Illinois, the chairman of the Public Utility Commission is appointed by the governor. In other jurisdictions, the commissioners themselves select one of

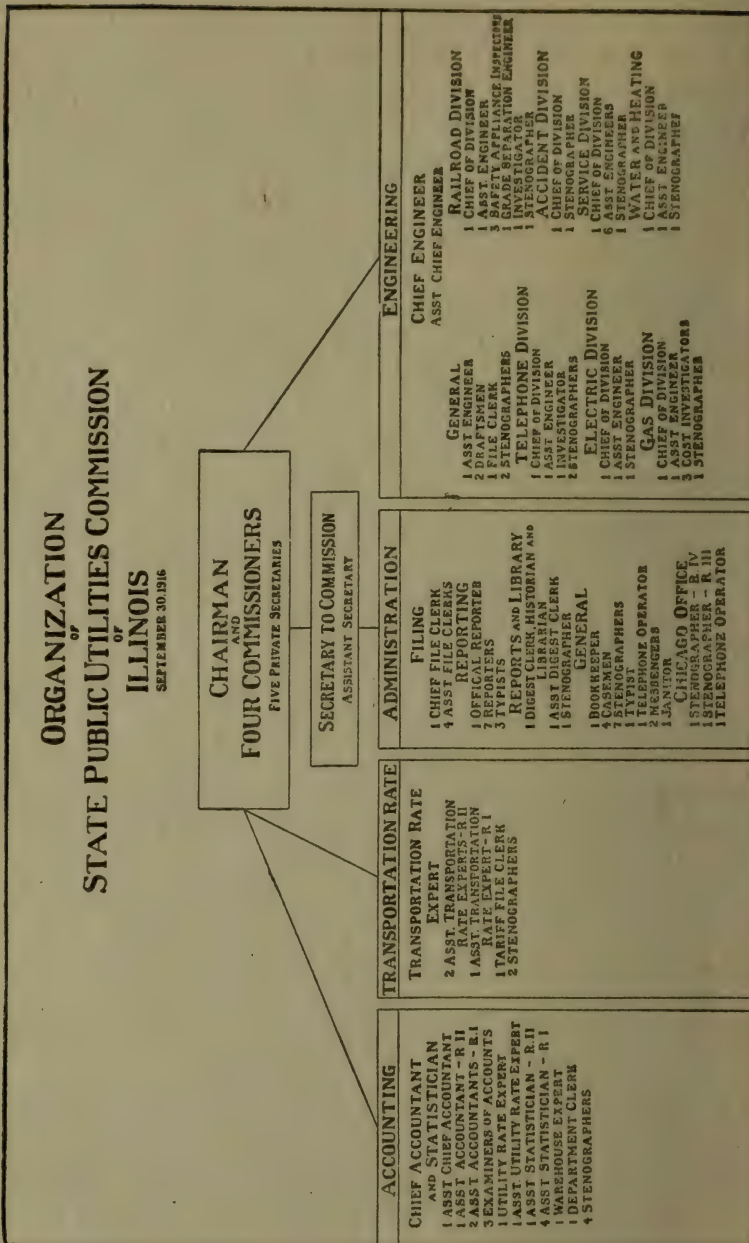


Fig. 61.—Organization of Illinois Public Utilities Commission

their number to act in this capacity. Quite frequently the chairmanship is conferred for a limited time and assigned in rotation so that eventually each one of the commissioners serves as chairman of a particular commission. This is the practice in connection with the Interstate Commerce Commission. The commissioners appoint one of their number chairman. Quite frequently, the chairmanship is assigned in rotation so that each one serves in turn as chairman.

ADMINISTRATION

In the handling of complaints, one of the commissioners usually hears the issue personally, or it may be presented to the entire commission. In other instances, the case is heard by an examiner who takes necessary evidence, examines the witnesses, and makes a tentative report to the commission which, if no objection is entered to the tentative report as served upon the principals in the issue, adopts the examiner's report as its own, and tenders an order accordingly.

In some instances, the secretary conducts the correspondence between the commission and the public. Most correspondence between the Interstate Commerce Commission and the various shipping interests is handled over the signature of Secretary McGinty of that body.

Where the commission is concerned with the supervision of many utilities, such as lighting, traction, or storing, in which a divisional type of organization predominates, each division being in charge of an expert, the head of the particular division handles the correspondence and complaints falling within the scope of the activities of that division.

The technical experts, tariff men, and rate men are

usually recruited by civil service examinations. Requirements for examinations are such that usually only high-grade men are secured for these positions. Salaries range up to \$6,000 or \$8,000 per annum.

Some commissions formulate rules regarding the publication and the filing of schedules. In the administration of these rules, the services of competent tariff men are required to analyze schedules as they are received, in order to determine whether or not they comply with the regulations, and, if not, to arrange for their rejection and their reissue in conformity with the legal regulations.

The rate experts are, for the most part, engaged in examining evidence submitted in rate cases, statistical tables and the like, and in formulating tentative orders for approval and adoption by the commission.

OKLAHOMA PLANS

As evidencing the scope of the activities of the progressive utility commission, the following excerpt from the *Second Annual Report of the Corporation Commission of the State of Oklahoma* is relevant:

Complaints that are filed before the commission are classified for the purpose of disposition into formal and informal. Informal complaints are adjusted by correspondence and without a hearing. Formal complaints are those which require a hearing. Informal complaints average from two to five a day. The commission will hereafter keep a definite record of matters of this kind disposed of during the next fiscal year.

There were 302 formal complaints filed since the last annual report, and disposition has been made of 284. Various subjects involved include train service, new depots, depot service, spur and side track, rates, telegraph service, crossings, physi-

cal connections of railways, telephone lines, depot agents, and many other matters too numerous to mention. Of all the cases of appeal from the rulings of the commission, 21 have been affirmed, or appeals therein dismissed. Seven orders of the commission have been set aside, and many others have been remanded to the commission to take further evidence or to make additional findings of fact.

The commission has divided the work into the following divisions or departments: rate, accounting, engineering, telephone, gas and electric light, and private corporations.

Rate Department

This department is prepared and doing a very thoro work in the handling of freight traffic and in the making of comparisons between rates in force in this state and other states. We have on file 16,000 tariffs. The railroad commission of Vermont has approximately 2,000 tariffs; the state of Georgia, 7,500. The scope of information available in this department includes every tariff in effect on every railroad doing business in the state of Oklahoma, and on every railroad connecting with a railroad doing business in Oklahoma, by means of which a correct rate can be quoted on any commodity from any point in the United States to or thru Oklahoma. Our tariff files have been declared by railroad experts to be the most complete in the United States, with the exception of the Interstate Commission, at Washington.

There is a large number of informal complaints handled thru this department, such as overcharges for freight, which usually grow out of an error by the local agent applying the wrong tariff. While the commission has no jurisdiction over controversies growing out of interstate shipments, it has accomplished much for the shippers of the state by quoting to the proper railroad officials the correct rate and by insisting upon the prompt payment of overcharges. In a few cases where the railroads have refused to make these settlements promptly, the commissions filed complaints for the use and benefit of the shippers before the Interstate Commerce Commission.

The amount of freight refunded since our last report will amount to approximately \$20,000. However, this is a very inadequate indication of the actual amount involved. In many instances the adjustment of one car has resulted in the refund, on the same basis, of several other cars, and has resulted in a discontinuance of the overcharge, not only to this shipper but to other shippers similarly situated, thereby establishing the correct rate for the benefit of all. This has also resulted in making the local employees of the railroads more careful in applying the proper tariffs, and overcharges are growing less frequent every day. Specific cases have varied in the refund of claims involving from 15 cents to \$2,800.

While this department has turned back to shippers in actual cash three times as much as it has cost to maintain the same, yet the greatest benefit results from the constant effort on the part of the commission to have railroad employees to apply freight tariffs properly. It is but natural, if the agent collects less than the tariff schedule, that he must make up the difference, and it has been the custom heretofore to give himself the benefit of the doubt, and if he did not know the correct tariff, to be sure to charge enough to obviate the making up of any shortage out of his earnings. This has had the effect, in a few instances, of the replacement of employees who were shown to be incompetent or indifferent.

There has been much complaint of the interstate rate between Arkansas and Oklahoma, and between Texas points and Oklahoma, and the rate department is now preparing a table of comparisons that these unreasonable short-distance interstate rates between these states may be adjusted. With this department, the commission has been able to render valuable service in the rate hearings now pending in the federal courts, and also in all rate hearings before the commission.

Accounting Department

In this report are abstracts compiled by the auditing department from the annual reports of railroad corporations, street

railroad corporations, and express companies, for the year ending June 30, 1909. The Commission promulgated an accounting order, No. 201, effective July 1, 1909, providing for a uniform system of accounts covering operating revenues and operating expenses of all public service properties operated in Oklahoma. It also requires railroad companies to classify expenditures for road and equipment and other accounts covering locomotive-miles, train-miles, ton-miles, passenger-miles, and car-miles, and other requirements. This accounting order requires much greater detail than in the former system used, which was similar to that required by the Interstate Commerce Commission.

Monthly comparative reports of operating revenues and operating and other expenses are required from all public service companies, effective July 1, 1909. The correcting and testing of these reports as they come in and the making of necessary corrections therein require considerable time. The commission has found it necessary to inspect the same very closely. We now have the most complete and effective accounting system of any commission in the United States.

Engineering Department

The constitution provides that the commission shall, as soon as practicable, find the original and reproductive cost of railroads and all other public service property. To do this work properly involves much detailed work. These valuations must be practically separated into miles. This work has progressed to that point where, within a short time, the physical valuation of the railroads in Oklahoma can be accurately determined.

The commission has published a map, prepared by this department, which has been distributed to the shippers and public schools of the state. This map has been a very valuable reference for business interests of every class and character. It has been praised from every locality within the borders of the state. That it is an exceptionally well-prepared work of its kind is indicated by the letter sent to the commission from

Mr. Julius Kruttschmitt, operating head of the Harriman System, who pronounced it the most complete and valuable railroad map he has ever seen.

Telephone Department

The work of this department is somewhat similar to that of the engineering department so far as ascertaining the original and reproductive values of telephone properties. Actual inventories and appraisements have been made of the plants at Purcell, Lexington, Enid, Anadarko, Durant, McAlester, Guthrie, Woodward, and the Grand County Rural & Pioneer Company's plant at Pond Creek. In addition to these large plants, fifty-nine other plants have been appraised during the last year.

This department has compiled maps of nineteen counties, showing the telephone lines operating within each county. This work will be continued as rapidly as possible. This department compiled valuable data in the Western Union tax cases that had much to do in substantiating the state's position in those cases before the court.

Gas and electric light companies have been added to this department, and investigations of certain properties of this character are now in progress.

The commission also has under investigation a proposed order to reduce toll rates in the state, but, by reason of so many rapid changes in the larger towns of the state requiring additional facilities, most companies have been taxed to their utmost financial limit to respond to these demands. This hearing will be continued during the next few months.

Private Corporations

In this department, all private corporations make reports as to the amount of their stocks, stockholders, agents, etc., and the department has been a great source of information to the general public in ascertaining the location or address of certain corporations. It has become more important since the act of

the legislature requiring certain classes of corporations to pay a license tax, upon the payment of which the commission is authorized to issue license for such corporation to do business in the ensuing year. To comply with this law, it is necessary that all domestic and foreign corporations doing business in Oklahoma make an accurate report to the commission annually. This keeps information of this character up to date. There are between twenty and thirty thousand domestic and foreign corporations now doing business in Oklahoma.

SUBORDINATE POSITIONS

The commissionerships range up to \$15,000 per annum, and while the obtaining of these positions is largely a matter of political preferment, there are many lucrative subordinate positions that are open to traffic men thru the medium of civil service examinations. The annual report of expenditures of the Interstate Commerce Commission gives, for example, among many others, the following positions and the remuneration attached:

<i>Position</i>	<i>Salary</i>
Statistician	\$5,000
Chief of Division of Tariffs.....	5,000
Attorney-examiner	3,900
Assistant Solicitor	4,500
Assistant Secretary	3,600
Attorney-examiner	3,000
Special Agent	3,000
Confidential Clerk.....	2,400
File Clerk.....	2,400
Inspector	1,800

A comprehensive knowledge of the federal Act to Regulate Commerce, and of state regulations with

respect to public utility control, an intimate acquaintance with the conference rulings of such commissions, and the interpretation of the statutes by the Supreme Court, are necessary requirements of the traffic man who will make good in this sphere. It is not only a growing and lucrative field, but one which is receiving greater appreciation from the public as the importance of adequate transportation facilities becomes more and more apparent.

THE TRAFFIC FIELD

PART V

RAILWAY TRAFFIC MANAGEMENT

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THE TRAFFIC FIELD

PART V

RAILWAY TRAFFIC MANAGEMENT

The Sale of Transportation—Lack of Efficiency in the Past—Progressive Policy of the Present—Organization—Traffic Manager—Assistant Traffic Manager—General Freight Agent and Assistant General Freight Agent—Division Freight Agent—The Commercial Agent—The Traveling Freight Agent—Chief of Tariff Bureau—The Foreign Freight Agent—The Industrial Agent—Tariff Work.

THE SALE OF TRANSPORTATION

The story of the construction and development of American railways is full of the glamor of romance and adventure. Nevertheless, the energy and money expended on them had only one object in view, the creation of a machine for the manufacture of transportation. The conveyance of persons and of property by means of power-drawn or impelled vehicles is the only product of this enterprise, and railway traffic management is concerned with the intelligent sale of this product.

The relationship of the public and the carriers is that of buyer and seller. The multiplicity of operations necessary in creating the product has resulted in the oversight of this somewhat elementary tho fundamental fact by many of those engaged in the work.

The charge is frequently made with more or less justice that railroad men as a class are notoriously

poor business men. They are said to be particularly lacking in the business of salesmanship; great efforts are made in developing a comprehensive organization, elaborate train schedules, efficient equipment, and terminal facilities, but the interests of the patrons of the plant are slighted, or entirely disregarded.

Lack of Efficiency in the Past

Railroads have been such large employers of labor that it has been virtually impossible for them to establish standards for admission to the service. They have been compelled to accept such material as was offered rather than to select from what they desired. In the not far-distant past, practically the only requirement for admission to railroad service was that the applicant be able to read and write and be versed to some little extent in the elementary divisions of mathematics. A man so qualified would be acceptable as a junior clerk in some railroad station or in one of the general offices of the company. By successive promotions based to a great extent on seniority, and to a lesser extent on merit, that man might eventually become an agent or a general officer of the corporation. While, in his particular province, he might be a very able man, his knowledge of the laws of barter and trade would leave much to be desired.

Many of the executives of carriers exhibit a decidedly hostile manner toward the rights of the shippers. Conceding that such an attitude is to some extent justified because of disadvantageous legislation, unfair practices, and similar methods of unscrupulous persons, it is apparent that its continuation will aggravate rather than alleviate the situation.

Progressive Policy of the Present

In opposition to this policy, the "get-together" campaigns inaugurated by some railway managements are particularly gratifying. Officials of the operating, traffic, and executive staffs go over the road, interview shippers, and appear before chambers of commerce. They invite complaint and constructive criticism in order that improvements may be established and innovations inaugurated that will tend toward the elimination of every cause of dissatisfaction. This is a clever adaptation of a commercial practice to determine what is wrong with the product, why it doesn't sell, and what steps are necessary to improve its quality and to accelerate its distribution.

ORGANIZATION

It is not intended in this work to enter into an exhaustive discussion of the entire subject, but rather to treat railway traffic management as a profession.

The subject of railway organization and management has been very ably treated in a book by that name¹ by James Peabody, late statistician of the Atchison, Topeka & Santa Fe Railway. He presents various types of organization for consideration, and treats at length the merits of the departmental and divisional schemes.

In Fig. 62, a divisional or regional type of railroad traffic organization is illustrated. In a large trans-continental line such as this one, the work of each department assumes such proportions that it is neces-

¹ *Railway Organization and Management*, LaSalle Extension University.

THE TRAFFIC FIELD

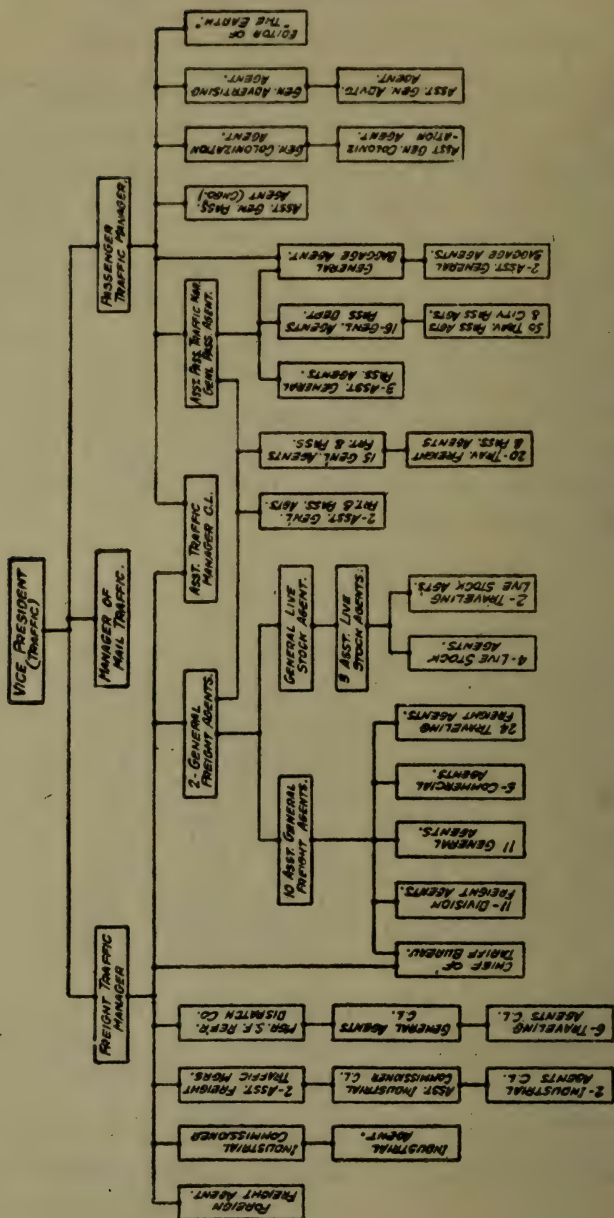


FIG. 62.—Organization of the Freight Traffic Department of the Atchison, Topeka & Santa Fe Railway

sary to segregate the various activities of the departments, and to assign their administration to specially trained individuals.

Traffic Manager

In this organization, one of the vice presidents of the company is made head of the traffic department. The freight traffic manager, the passenger traffic manager, and the manager of mail traffic are each charged with a particular function, and report to him independently of each other.

Assistant Traffic Manager

Reporting to the heads of the three main divisions thus established, are stars of lesser magnitude, each charged with the administration of a certain function, or the administration of similar functions at different portions of the line. There is, for example, an assistant freight traffic manager at San Francisco, and one at Chicago, the termini of the system. Each one is a court of last resort for the staff officers under his respective jurisdiction. Generally speaking, these executives are charged with the enforcement of the policy which has been adopted by the line to build up business within these particular provinces.

General Freight Agents and Assistant General Freight Agents

Two general freight agents supervise the traffic of the line divided east and west by Albuquerque, N. M., and various assistant general freight agents report to

each of them. As the organization thus proceeds downward, the work becomes more and more specialized. In the general freight department, for example, the general freight agent may apportion the work on the basis of the nature of the commodity involved—coal, grain, ore—and he may place the supervision of the establishment of rates, and the correspondence relative to it in the hands of one of his assistants. Thus we have a general coal agent, a general ore agent or a general produce agent. Each one may be styled as such, or he may be an assistant general freight agent.

Again, the work may be apportioned on a regional basis. That is, an assistant general freight agent will have entire charge of the initiating of rates and of the general correspondence relating to rates and rate matters affecting stations within his particular jurisdiction.

As the handling of live stock is accomplished by methods and confronted by legal objections radically different from ordinary freight, most carriers have a special division in the traffic department to handle questions involving the transportation of live stock.

The general freight agents, who are the chief officers of the general freight department, attend conferences with similar representatives from lines in the same territory or from competing lines, and agree on the adoption of rules and of bases to be used in effecting new rates or in the readjustment of old ones. They agree on the essentials, and leave the details to be worked out by the subordinate officers of the department.

The jurisdiction of the general freight agent and his assistant is still further localized by the creation of division freight agencies. These officers assume charge over a certain division of the line, arrange for the

solicitation of freight, and supervise the administration of traffic work so far as it concerns station employees and others within their jurisdiction.

Chief of Tariff Bureau

The chief of the tariff bureau is charged primarily with the duty of issuing railroad freight schedules setting forth the rates or charges for transportation over the line.

The Foreign Freight Agent

If a road has a seaboard terminal, it usually establishes there a foreign freight agency. The foreign freight agent is charged with the duty of entering and clearing such shipments as may be intrusted to the care of the line, arranging for cargo space, quoting current space rates, and directing many other activities which have to do with foreign markets.

Usually, the larger systems have fast-freight lines or dispatch lines. The activities of such lines are centralized in a dispatch line manager, who studies the quality and frequency of service, and makes the necessary revision in schedules from time to time. In many cases, the dispatch line manager will have a separate solicitation force. This practice results in sending two men after the same consignment, and for this reason it has been condemned. Nevertheless, it is continued by many managements.

General Agents

General agencies, which are in charge of general agents, are established thruout the country, not neces-

sarily at points served or reached by the company by which they are employed. In many cases, they have jurisdiction over all matters pertaining to transportation in that particular locality, whether passenger or freight.

The Commercial Agent

Where the locality is not of sufficient importance or where, for some other reason, it is deemed unnecessary to open a general agency, a commercial agency may be opened with a commercial agent in charge who is vested with the supervision of matters pertaining to the development of the road's tonnage into and from that point.

The Traveling Freight Agent

The traveling freight agent may work out of a division, a general, or a commercial agency. His duties contemplate interviewing shippers within a certain zone, for the purpose of influencing them to route favorably the tonnage under their control.

The Industrial Agent

It is the business of the industrial agent to develop the resources on and adjacent to the line he represents. Not only must he sell transportation to the industries already accessible, but he must induce new industries to locate where they will increase the road's traffic. The industrial agent can with advantage keep in close touch with development boards, chambers of commerce, commercial clubs, and the like.

Selling Transportation

Transportation has been alluded to in this work as a staple, an article of barter and trade. It seems fundamentally wrong to call the development of business by a transportation company "the solicitation of freight" instead of "the selling of transportation."

Every Railroad Employee a Salesman

Everyone connected in any capacity with the operation of a railroad is selling transportation directly or indirectly. A track walker, negligently performing his duties and overlooking a badly worn or broken rail, is responsible for the subsequent wreck which causes the destruction, damage, or undue delay of goods. The result of this one act of carelessness may be that the incensed patron will route future shipments via a competing line.

Similar consequences may result from the failure of the carrier to maintain a time-schedule upon which the patron, assured by the commercial representative, has relied. Likewise, if the general freight agent requires a shipper to prosecute his complaint before some public utility commission before making a readjustment of discriminatory rates, the road is unlikely to sell transportation to that shipper again, if he can possibly avoid buying it.

The Law of Supply and Demand

The marketability of nearly every article is influenced by the law of supply and demand. Transportation is no exception to this rule. Following the declaration of the European war, hundreds of American tourists,

caught abroad, willingly paid for steerage accommodations on homeward-bound boats sums in excess of normal first-cabin rates.

One of the railroad promoter's strongest arguments is the great amount of tonnage that will be attracted to the new project in preference to slow-going water transportation, and more slow-going highway traffic, either horse-drawn or motor-propelled. If an area becomes productive, the development of transportation instrumentalities naturally follows.

Salesmen's Practices

In regions abundantly supplied with transportation, the shipper may choose one of several routes, all more or less direct. One line may have advantages of service which other lines cannot possibly offer. For instance: From points in New England to many Texas destinations, the coastwise steamship lines, in conjunction with their rail connections, have a decided advantage over the overland route, both in point of time and in the amount of charge.

A railroad solicitor once assured a shipper that his company could handle the shipments as cheaply as any other railroad. In accordance with the soliciting representative's instructions, the shipment was forwarded via this road entirely by rail. Subsequent developments showed that the shipment could have been forwarded via one of the coastwise lines for a smaller charge and in a shorter time.

On being accused of misrepresentation, the railroad representative replied that he meant that the railroad company he represented could handle the shipment as cheaply as any other combination of rail lines; that

the shipper had not asked about rail-and-water lines; and that he inferred that the shipper was interested in all-rail service only. This, to say the least, was viewed by the shipper as rather a sharp practice, and it required considerable missionary work to wean him from his subsequent policy of routing all his business against the railroad whose representative was at fault.

It is better that shippers be informed of such differences. Too often railroad representatives urge the advantages of their routes without referring to the disadvantages.

QUALIFICATIONS OF TRANSPORTATION SALESMEN

The first requirement in successful salesmanship is that the salesman thoroly know and understand what he is to sell. With this in view, the traffic department representatives should analyze the services their company offers to the public to determine: (1) the class, that is, rail, water, or a combination of both; (2) the quantity or frequency of service; and (3) the quality, expedited, slow, or a combination.

Package car routes out of centers thruout the country should be given consideration. In many cases, it is possible to route business up to such centers by way of a connection operating a package car from a junction point. This may result in a much more satisfactory service than if the goods were routed at random.

The advantages possessed by the competing lines should be carefully studied in order to determine whether or not they may be overcome by the establishment of a special train, a thru package car, or an expedited service of similar merit.

The personal element in selling transportation is a big factor. Representatives of the company who are to deal with the general public should be men of agreeable disposition. Many an executive's relative, silk stocking aristocrat or social snob, has failed to make good in traffic work because of his inability to meet the shipping public in a democratic instead of an autocratic manner.

Shippers who have not availed themselves of the services of competent traffic men rarely know anything of the intricacies surrounding rail transportation, and, as a consequence, rely to a very great extent on the assurances given them by the representatives of the various railroads with whom they deal. A little extra time spent in unravelling the transportation problems of men of this type is about the best investment a traffic salesman can make. If on competitive propositions he suggests other routes than his own, the client will feel that his interests are being considered, and will apportion his tonnage accordingly.

The personal interview of clients is the most prolific source of tonnage and the one most commonly resorted to by soliciting representatives. News items appearing in the daily press should be carefully watched for municipal improvements and building construction, and items related to shipping. A news item announcing that Hiram Jones is going to purchase a new mowing machine, or other agricultural implement, suggests to the traffic representative an opportunity of routing that shipment over the line that he represents.

RATE SURVEYS

There is an unusual amount of technical and statistical work within the department which can be accom-

plished only by the efforts of trained men. Such work demands a thoro understanding of the relationship between the public and the carrier, and a knowledge of improved methods of conveyance.

Elaborate formulas and bases for rates exist, and the policy has been to let these rest rather than to improve them to meet the everchanging demands of the carrier serving the industry. Following the passage of the Act to Regulate Commerce and its subsequent enforcement by the Interstate Commerce Commission, some managers took the stand that if they were not going to be permitted to increase their rates without official sanction, they did not intend to reduce them.

In checking in or establishing a line of rates, considerable care must be taken in the observance of long-and-short-haul provisions of federal and state statutes.

In the course of instruction offered by the LaSalle Extension University, many of the formulas and bases in actual use in many of the regional zones of this country are exemplified in great detail. Anyone proficient in this course of study need have no apprehension as to his ability to make good in this class of work in railroad traffic departments. Efficiency in this work is likewise greatly enhanced by a knowledge of adjustments prevailing in other sections of the country. It broadens one's viewpoint of rate-making methods to come in contact with problems outside of daily routine.

The publications issued by the tariff bureau are many and voluminous. For the construction and filing of such publications, men acquainted with the regulations of the state and federal government are needed. These regulations, to a great extent, have been stand-

ardized, and the arrangement of many schedules is thus predetermined.

Unfortunately, perhaps, the phraseology employed in establishing rules and regulations governing such schedules is unduly ponderous and vague. It is possible to simplify these publications greatly so that they can be readily understood by men of average intelligence. Station agents are often utterly at sea under present conditions.

The question of expense incurred in publication should be given some consideration. It has been observed that many employees feel that, inasmuch as they are employed by a wealthy corporation, expense is a secondary consideration. Tariff data have sometimes been spread out over a half dozen or more pages when a single sheet would have been sufficient.

Under governmental control, and with the increase in transportation charges, it is quite evident that the railroad companies are going to be in a position to pay much better wages than heretofore. This will result in establishing standards for admission to the service which will require a certain degree of familiarity with the enterprise. The course previously mentioned is suggested as one of the most efficacious mediums to employ in acquiring that efficiency necessary to make good and make better.

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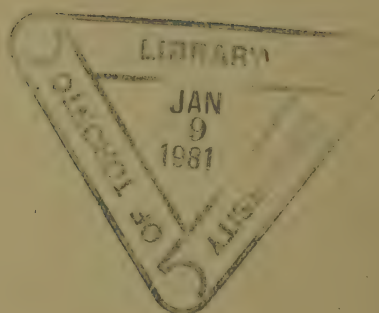
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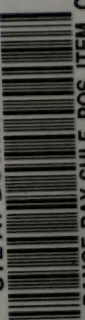
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